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I. HORACE MANN.*

HORACE MANN, the first Secretary of the Board of Education for the State of Massachusetts, and President of Antioch College, at Yellow Springs, Ohio, was born in the town of Franklin, Norfolk County, Mass., May 4, 1796. His father, Mr. Thomas Mann, supported his family by cultivating a small farm. He died when the subject of this memoir was thirteen years of age, leaving him little besides the example of an upright life, virtuous inculcations, and hereditary thirst for knowledge.

The narrow circumstances of the father limited the educational advantages of his children. They were taught in the district common school; and it was the misfortune of the family that it belonged to the smallest district, had the poorest school-house, and employed the cheapest teachers, in a town which was itself both small and poor.

His father was a man of feeble health, and died of consumption. Horace inherited weak lungs, and from the age of twenty to thirty years he just skirted the fatal shores of that disease on which his father had been wrecked. This inherited weakness, accompanied by a high nervous temperament, and aggravated by a want of judicious physical training in early life, gave him a sensitiveness of organization and a keenness of susceptibility, which nothing but the iron clamps of habitual self-restraint could ever have controlled.

His mother, whose maiden name was Stanley, was a woman of superior intellect and character. In her mind, the flash of intuition superseded the slow processes of ratiocination. Results always ratified her predictions. She was a true mother. On her list of duties and of pleasure her children stood first, the world and herself afterward. She was able to impart but little of the details of knowledge; but she did a greater work than this, by imparting the principles by which all knowledge should be guided.

Mr. Mann's early life was spent in a rural district, in an obscure county town, without the appliance of excitements or opportunity for display. In a letter before us, written long ago to a friend, he says:—

I regard it as an irretrievable misfortune that my childhood was not a happy one. By nature I was exceedingly elastic and buoyant, but the poverty of my

* This Memoir is abridged in part from an article in Livingston's "*Law Journal*," which also appeared in Livingston's "*Eminent Americans*."

parents subjected me to continual privations. I believe in the rugged nursing of Toil, but she nursed me too much. In the winter time, I was employed in in-door and sedentary occupations, which confined me too strictly; and in summer, when I could work on the farm, the labor was too severe, and often encroached upon the hours of sleep. I do not remember the time when I began to work. Even my play-days,—not play-days, for I never had any,—but my play-hours were earned by extra exertion, finishing tasks early to gain a little leisure for boyish sports. My parents sinned ignorantly, but God affixes the same physical penalties to the violation of His laws, whether that violation be willful or ignorant. For willful violation, there is the added penalty of remorse, and that is the only difference. Here let me give you two pieces of advice, which shall be *gratis* to you, though they cost me what is of more value than diamonds. Train your children to work, though not too hard; and, unless they are grossly lymphatic, let them sleep as much as they will. I have derived one compensation, however, from the rigor of my early lot. Industry, or diligence, became my second nature, and I think it would puzzle any psychologist to tell where it joined on to the first. Owing to these ingrained habits, work has always been to me what water is to a fish. I have wondered a thousand times to hear people say, "I don't like this business;" or, "I wish I could exchange for that;" for with me, whenever I have had any thing to do, I do not remember ever to have demurred, but have always set about it like a fatalist; and it was as sure to be done as the sun is to set.

What was called the love of knowledge was, in my time, necessarily cramped into a love of books; because there was no such thing as oral instruction. Books designed for children were few, and their contents meager and miserable. My teachers were very good people but they were very poor teachers. Looking back to the school-boy days of my mates and myself, I can not adopt the line of Virgil,

"O fortunatos nimium sua si bona norint."

I deny the *bona*. With the infinite universe around us, all ready to be daguerreotyped upon our souls, we were never placed at the right focus to receive its glorious images. I had an intense natural love of beauty, and of its expression in nature and in the fine arts. As "a poet was in Murray lost," so at least an amateur poet, if not an artist, was lost in me. How often, when a boy, did I stop, like Akenside's hind, to gaze at the glorious sunset; and lie down upon my back, at night, on the earth, to look at the heavens. Yet with all our senses and our faculties glowing and receptive, how little were we taught; or rather, how much obstruction was thrust between us and nature's teachings. Our eyes were never trained to distinguish forms or colors. Our ears were strangers to music. So far from being taught the art of drawing, which is a beautiful language by itself, I well remember that when the impulse to express in pictures what I could not express in words was so strong that, as Cowper says, it tingled down to my fingers, then my knuckles were rapped with the heavy ruler of the teacher, or cut with his rod, so that an artificial tingling soon drove away the natural. Such youthful buoyancy as even severity could not repress was our only dancing-master. Of all our faculties, the memory for words was the only one specially appealed to. The most comprehensive generalizations of men were given us, instead of the facts from which those generalizations were formed. All ideas outside of the book were contraband articles, which the teacher confiscated, or rather flung overboard. Oh, when the intense and burning activity of youthful faculties shall find employment in salutary and pleasing studies or occupations, then will parents be able to judge better of the alledged proneness of children to mischief. Until then, children have not a fair trial before their judges.

Yet, with these obstructions, I had a love of knowledge which nothing could repress. An inward voice raised its plaint for ever in my heart for something nobler and better. And if my parents had not the means to give me knowledge, they intensified the love of it. They always spoke of learning and learned men with enthusiasm and a kind of reverence. I was taught to take care of the few books we had, as though there was something sacred about them. I never dog's-eared one in my life, nor profanely scribbled upon title pages, margin, or fly-leaf, and would as soon have stuck a pin through my flesh as through the pages of a book. When very young, I remember a young lady came to our house on a visit,

who was said to have studied Latin. I looked upon her as a sort of goddess. Years after, the idea that I could ever study Latin broke upon my mind with the wonder and bewilderment of a revelation. Until the age of fifteen I had never been to school more than eight or ten weeks in a year.

I said we had but few books. The town, however, owned a small library. When incorporated, it was named after Dr. Franklin, whose reputation was then not only at its zenith, but, like the sun over Gibeon, was standing still there. As an acknowledgment of the compliment, he offered them a bell for their church, but afterward, saying that, from what he had learned of the character of the people, he thought they would prefer sense to sound, he changed the gift into a library. Though this library consisted of old histories and theologies, suited perhaps to the "conscript fathers" of the town, but miserably adapted to the "proscript" children, yet I wasted my youthful ardor upon its martial pages, and learned to glory in war, which both reason and conscience have since taught me to consider almost universally a crime. Oh, when will men learn to redeem that childhood in their offspring which was lost to themselves! We watch for the seed-time for our fields and improve it, but neglect the mind until midsummer or even autumn comes, when all the *artinism* of the vernal sun of youth is gone. I have endeavored to do something to remedy this criminal defect. Had I the power, I would scatter libraries over the whole land, as the sower sows his wheat field.

More than by toil, or by the privation of any natural taste, was the inward joy of my youth blighted by theological inculcations. The pastor of the church in Franklin was the somewhat celebrated Dr. Emmons, who not only preached to his people, but ruled them for more than fifty years. He was an extra or hyper-Calvinist—a man of pure intellect, whose logic was never softened in its severity by the infusion of any kindliness of sentiment. He expounded all the doctrines of total depravity, election, and reprobation, and not only the eternity but the extremity of hell torments, unflinchingly and in their most terrible significance, while he rarely if ever descanted upon the joys of heaven, and never, to my recollection, upon the essential and necessary happiness of a virtuous life. Going to church on Sunday was a sort of religious ordinance in our family, and during all my boyhood I hardly ever remember of staying at home.

As to my early habits, whatever may have been my shortcomings, I can still say that I have always been exempt from what may be called common vices. I was never intoxicated in my life—unless, perchance, with joy or anger. I never swore—indeed profanity was always most disgusting and repulsive to me. And (I consider it always a climax,) I never used the "vile weed" in any form. I early formed the resolution to be a slave to no habit. For the rest, my public life is almost as well known to others as to myself; and, as it commonly happens to public men, *others know my motives a great deal better than I do.*

Mr. Mann's father having died when he was thirteen years of age, he remained with his mother on the homestead until he was twenty. But an irrepressible yearning for knowledge still held possession of him. "I know not how it was," said he to a friend in after life, "its motive never took the form of wealth or fame. It was rather an instinct which impelled toward knowledge, as that of migratory birds impels them northward in spring time. All my boyish castles in the air had reference to do something for the benefit of mankind. The early precepts of benevolence, inculcated upon me by my parents, flowed out in this direction; and I had a conviction that knowledge was my needed instrument."

A fortunate accident gave opportunity and development to this passion. An itinerant schoolmaster, named Samuel Barrett, came into his neighborhood and opened a school. This man was eccentric and abnormal, both in appetites and faculties. He would teach a

school for six months, tasting nothing stronger than tea, though in this Dr. Johnson was a model of temperance compared with him, and then for another six months, more or less, he would travel the country in a state of beastly drunkenness, begging cider, or any thing that would intoxicate, from house to house, and sleeping in barns and styes, until the paroxysm had passed by. Then he would be found clothed, and sitting in his right mind, and obtain another school.

Mr. Barrett's speciality was English grammar, and Greek, and Latin. In the dead languages, as far as he pretended to know any thing, he seemed to know every thing. All his knowledge, too, was committed to memory. In hearing recitations from Virgil, Cicero, the Greek Testament, and other classical works, then usually studied as a preparation for college, he never took a book into his hand. Not the sentiments only, but the sentences, in the transposed order of their words, were as familiar to him as his A, B, C, and he would as soon have missed a letter out of the alphabet, as article or particle out of the lesson. This learned Mr. Barrett was learned in languages alone. In arithmetic he was an idiot. He never could commit the multiplication table to memory, and did not know enough to date a letter or tell the time of day by the clock.

In this chance school Mr. Mann first saw a Latin grammar; but it was the *veni, vidi, vici* of Cæsar. Having obtained a reluctant consent from his guardian to prepare for college, with six months of schooling he learned his grammar, read Corderius, Æsop's Fables, the Æneid, with parts of the Georgics and Bucolics, Cicero's Select Orations, the Four Gospels, and part of the Epistles in Greek, part of the Græca Majora and Minora, and entered the Sophomore class of Brown University, Providence, in September, 1816.

Illness compelled him to leave his class for a short period; and again he was absent in the winter to keep school as a resource for paying college bills. Yet, when his class graduated in 1819, the first part or "Honor" in the comencement exercises was awarded to him, with the unanimous approval of Faculty and classmates. The theme of his oration on graduating foreshadowed the history of his life. It was on the Progressive Character of the Human Race. With youthful enthusiasm, he portrayed that higher condition of human society when education shall develop the people into loftier proportions of wisdom and virtue, when philanthropy shall succor the wants and relieve the woes of the race, and when free institutions shall abolish that oppression and war which have hitherto debarred nations from ascending into realms of grandeur and happiness.

Immediately after commencement (indeed some six weeks before, and immediately after the final examination of his class, so that no time might be lost; for the law then required three years' reading in a lawyer's office, or rather three years to be spent in a lawyer's office without any reference to reading,) he entered his name in the office of the Hon. J. J. Fiske, of Wrentham, as a student at law. He had spent here, however, only a few months when he was invited back to college as a tutor in Latin and Greek. This proposal he was induced to accept for two reasons: first, it would lighten his burden of indebtedness (for he was living on borrowed money;) and, second, it would afford the opportunity he so much desired of revising and extending his classical studies.

He now devoted himself most assiduously to Latin and Greek, and the instructions given to his class were characterized by two peculiarities, whose value all will admit, though so few have realized. In addition to rendering the sense of the author, and a knowledge of syntactical rules, he always demanded a translation in the most elegant, choice, and euphonious language. He taught his Latin classes to look through the whole list of synonyms given in the Latin-English dictionary, and to select from among them all the one which would convey the author's idea, in the most expressive, graphic, and elegant manner; rendering military terms by military terms, nautical by nautical, the language of rulers in language of majesty and command, of suppliants by words of entreaty, and so forth. This method improves diction surprisingly. The student can almost feel his organ of language grow under its training; at any rate, he can see from month to month that it has grown. The other particular referred to, consisted in elucidating the text by geographical, biographical, and historical references; thus opening the mind of the student to a vast fund of collateral knowledge, and making use of the great mental law, that it is easier to remember two or even ten associated ideas than either of them alone.

Though liberal in granting indulgences to his class, yet he was inexorable in demanding correct recitations. However much privation or pain the getting of the lesson might cost, yet it was generally got *as the lesser evil*. One day a student asked the steward of the college what he was going to do with some medicinal preparation he had. "Mr. So and So," said the steward, "has a violent attack of fever, and I am going to give him a sweat." "If you want to give him a sweat," said the inquirer, "send him into our recitation room without his lesson."

While in college, Mr. Mann had excelled in scientific studies. He

now had an opportunity to improve himself in classical culture. A comparison of the two convinced him how infinitely inferior in value, not only as an attainment, but as a means of mental discipline, is heathen mythology to modern science; the former consisting of the imaginations of man, the latter of the handiwork of God.

In the latter part of 1821, having resigned his tutorship, he entered the law school at Litchfield, Connecticut, then at the zenith of its reputation, under the late Judge Gould. Here he remained rather more than a year, devoting himself with great assiduity to the study of the law under that distinguished jurist. Leaving Litchfield, he entered the office of the Hon. James Richardson, of Dedham, was admitted a member of the Norfolk bar, in December, 1823, and immediately opened an office in Dedham.

We believe the records of the courts will show that, during the fourteen years of his forensic practice, he gained at least four out of five of all the contested cases in which he was engaged. The inflexible rule of his professional life was, never to undertake a case that he did not believe to be right. He held that an advocate loses his highest power when he loses the ever-conscious conviction that he is contending for the truth; that though the fees or fame may be a stimulus, yet that a conviction of being right is itself *creative* of power, and renders its possessor more than a match for antagonists otherwise greatly his superior.

In 1827, Mr. Mann was elected to the Massachusetts House of Representatives, for the town of Dedham, and continued to be returned until the year 1833, when he removed to Boston, and entered into a partnership with Edward G. Loring. At the first election after his becoming a citizen of Boston, he was chosen to the State Senate for the county of Suffolk, which post he was returned to for the four succeeding elections. In 1836 that body elected him its president, and again in 1837, in which year he retired from political life to enter upon the duties of Secretary of the Board of Education. During his legislative course Mr. Mann took an active part in the discussion of all important questions, especially of such as pertained to railroads, public charities, religious liberty, suppression of traffic in lottery tickets, and spirituous liquors, and to education.

He advocated laws for improving the system of common schools. He, more than any other man, was the means of procuring the enactment of what was called the "Fifteen Gallon Law," for the suppression of intemperance in Massachusetts. He was a member of the committee who reported the resolves which subsequently resulted in the codification of the statute laws of Massachusetts. He took a leading

part in preparing and carrying through the law whose stringent provisions for a long time, and almost effectually, broke up the traffic in lottery tickets.

But the act by which Mr. Mann most signalized his legislative life in the House of Representatives was the establishment of the State Lunatic Hospital of Worcester. This benevolent enterprise was conceived, sustained, and carried through the House by him alone, against the apathy and indifference of many, and the direct opposition of some prominent men. He moved the appointment of the original committee of inquiry, and made its report, drew up and reported the resolve for erecting the hospital, and his was the only speech made in its favor. After the law was passed, he was appointed chairman of the Board of Commissioners to contract for and superintend the erection of the Hospital. When the buildings were completed, in 1833, he was appointed chairman of the Board of Trustees for administering the institution, and remained on the Board until rotated out of office by the provisions of the law which governed it.

We subjoin a sketch of Mr. Mann's speech in behalf of the resolve for establishing the Hospital:—

Mr. Mann, of Dedham, requested the attention of the House to the numbers, condition, and necessities of the insane within this commonwealth, and to the consideration of the means by which their sufferings might be altogether prevented, or at least assuaged. On reviewing our legislation upon this subject, he could not claim for it the praise either of policy or humanity. In 1816 it was made the duty of the Supreme Court, when a grand jury had refused to indict, or the jury of trials to convict such person, by reason of his insanity or mental derangement, to commit any person to prison, there to be kept until his enlargement should be deemed compatible with the safety of the citizens, or until some friend should procure his release by becoming responsible for all damages which, in his insanity, he might commit.

Had the human mind been tasked to devise a mode of aggravating to the utmost the calamities of the insane, a more apt expedient could scarcely have been suggested; or, had the earth been searched, places more inauspicious to their recovery could scarcely have been found.

He cast no reflection upon the keepers of our jails, houses of correction, and poor houses, as humane men, when he said that, as a class, they were eminently disqualified to have the supervision and management of the insane. The superintendent of the insane should not only be a humane man, but a man of science; he should not only be a physician, but a mental philosopher. An alienated mind should be touched only by a skillful hand. Great experience and knowledge were necessary to trace the causes that first sent it devious into the wilds of insanity, to counteract the disturbing forces, to restore it again to harmonious action. None of all these requisites could we command under the present system.

But the place was no less unsuitable than the management. In a prison little attention could be bestowed upon the bodily comforts and less upon the mental condition of the insane. They are shut out from the cheering and healing influences of the external world. They are cut off from the kind regard of society and friends. The construction of their cells often debars them from light and air. With fire they can not be trusted. Madness strips them of their clothing. If there be any recuperative energies of mind, suffering suspends or destroys them, and recovery is placed almost beyond the reach of hope. He affirmed that he was not giving an exaggerated account of this wretched class of beings, between whom and humanity there seemed to be a gulf, which no one had as yet crossed to carry them

relief. He held in his hand the evidence which would sustain all that he had said. * *

From several facts and considerations, he inferred that the whole number of insane persons in the State could not be less than 500. Whether 500 of our fellow-beings, suffering under the bereavement of reason, should be longer subjected to the cruel operation of our laws, was a question which no man could answer in the affirmative, who was not himself a sufferer under the bereavement of all generous and humane emotions. But he would for a moment consider it as a mere question of saving and expenditure. He would argue it as if human nature knew no sympathies, as if duty imposed no obligations. And, in teaching Avarice a lesson of humanity, he would teach it a lesson of economy also.

Of the 298 persons returned, 161 are in confinement. Of these, the duration of the confinement of 150 is ascertained. It exceeds in the aggregate a thousand years;—a thousand years, during which the mind had been sequestered from the ways of knowledge and usefulness, and the heart in all its sufferings inaccessible to the consolations of religion. * *

The average expense, Mr. Mann said, of keeping those persons in confinement could not be less than $2.50 per week, or if friends had furnished cheaper support, it must have been from some motive besides cupidity. Such a length of time, at such a price, would amount to $130,000. And if 150 who were in confinement exhibit an aggregate of more than a thousand years of insanity, the 148 at large might be safely set down at half that sum, or 500 years. Allowing for these an average expense of $1 per week, the sum is $52,000, which added to $130,000 as above, makes $182,000. Should we add to this $1 per week for all, as the sum they might have earned had they been in health, the result is $234,000 lost to the State by the infliction of this malady alone; and this estimate is predicated only of 298 persons, returned from less than half the population of the State.

Taking results then, derived from so large an experience, it was not too much to say, that more than one-half of the cases of insanity were susceptible of cure, and that at least one-half of the expense now sustained by the State might be saved by the adoption of a different system of treatment. One fact ought not to be omitted, that those who suffer under the most sudden and violent access of insanity were most easily restored. But such individuals, under our system, are immediately subject to all the rigors of confinement, and thus an impassable barrier is placed between them and hope. This malady, too, is confined to adults almost exclusively. It is then, after all the expense of early education and rearing has been incurred, that their usefulness is terminated. But it had pained him to dwell so long on these pecuniary details. On this subject he was willing that his feelings should dictate to his judgment and control his interest. There are questions, said he, upon which the heart is a better counselor than the head,—where its plain expositions of right encounter and dispel the sophistries of the intellect. There are sufferers amongst us whom we are able to relieve. If, with our abundant means, we hesitate to succor their distress, we may well envy them their incapacity to commit crime. * *

But let us reflect, that while *we* delay *they* suffer. Another year not only gives an accession to their numbers, but removes, perhaps to a returnless distance, the chance of their recovery. Whatever they endure, which we can prevent, is virtually inflicted by our own hands. Let us restore them to the enjoyment of the exalted capacities of intellect and virtue. Let us draw aside the dark curtain which hides from their eyes the wisdom and beauty of the universe. The appropriation proposed was small—it was for such a charity insignificant. Who is there, he demanded, that, beholding all this remediable misery on one hand, and looking, on the other, to that paltry sum which would constitute his proportion of the expense, could pocket the money, and leave the victims to their sufferings? How many thousands do we devote annually to the cultivation of mind in our schools and colleges; and shall we do nothing to reclaim that mind when it has been lost to all its noblest prerogatives? Could the victims of insanity themselves come up before us, and find a language to reveal their history, who could hear them unmoved? But to me, said Mr. Mann, the appeal is stronger, because *they* are unable to make it. Over his feelings, their imbecility assumed the form of irresistible power. No eloquence could persuade like their heedless silence. It is now, said he, in the power of the members of this House to exercise their highest

privileges as men, their most enviable functions as legislators; to become protectors to the wretched, and benefactors to the miserable."

The execution of this great work illustrated those characteristics of the subject of this memoir which have signalized his life. The novelty and costliness of the enterprise demanded boldness. Its motive sprung from his benevolence. Its completion without loss or failure illustrated his foresight. It was arranged that no ardent spirits should ever be used on the work, and the whole edifice was completed without accident or injury to any workman. The expenditure of so large a sum as fifty thousand dollars without overrunning appropriations proved his recognition of accountability. The selection of so remarkable a man as Dr. Woodward for the superintendent, showed his knowledge of character. And the success which, after twenty years of experience, has finally crowned the work, denotes that highest kind of statesmanship, which holds the succor of human wants and the alleviation of human woes to be an integral and indispensable, as it is a most economical part of the duties of a paternal government. That Hospital has served as a model for many similar institutions in other states and countries, which, through the benevolent influence of its widely-known success, have been erected because that was erected.

In 1835, Mr. Mann was a member, on the part of the Senate, of a legislative committee to whom was intrusted the codification of the statute law of Massachusetts, and after its adoption he was associated with Judge Metcalf in editing the same for the press.

On the organization of the Board of Education for Massachusetts, on the 29th of June, 1837, Mr. Mann was elected its secretary, and entered forthwith on a new and more congenial sphere of labor. From the earliest day when his actions became publicly noticeable, universal education, through the instrumentality of free public schools, was commended by his word, and promoted by his acts. Its advocacy was a golden thread woven into all the texture of his writings and his life. One of his earliest addresses was a discourse before a county association of teachers. As soon as eligible, he was chosen a member of the Superintending School Committee of Dedham, and continued to fill the office until he left the place. In the General Court his voice and his vote were always on the side of schools.

Mr. Mann withdrew from all other professional and business engagements whatever, that no vocation but the new one might burden his hands or obtrude upon his contemplations. He transferred his law business then pending, declined re-election to the Senate, and—the only thing that caused him a regret—resigned his offices and his active connection with the different temperance organizations. He

abstracted himself entirely from political parties, and for twelve years never attended a political caucus or convention of any kind. He resolved to be seen and known only as an educationist. Though sympathizing as much as ever with the reforms of the day, he knew how fatally obnoxious they were to whole classes of people whom he wished to influence for good; and as he could not do all things at once, he sought to do the best things, and those which lay in the immediate path of his duty, first. Men's minds, too, at that time were so fired with partisan zeal on various subjects, that great jealousy existed lest the interest of some other cause should be subserved under the guise of a regard for education. Nor could vulgar and bigoted persons comprehend why a man should drop from an honorable and exalted station into comparative obscurity, and from a handsome income to a mere subsistence, unless actuated by some vulgar and bigoted motive like their own.* Subsequent events proved the wisdom of his course. The Board was soon assailed with violence by political partisans, by anti-temperance demagogues, and other bigots after their kind, and nothing but the impossibility of fastening any purpose upon its secretary save absolute devotion to his duty saved it from wreck. During a twelve years' period of service, no opponent of the cause, or of Mr. Mann's views in conducting it, was ever able to specify a single instance in which he had prostituted or perverted the influence of his office for any personal, partisan, or collateral end whatever.

It is obvious, on a moment's reflection, that few works ever undertaken by man had relations so numerous, or touched society at so many points, and those so sensitive, as that in which Mr. Mann was now engaged. The various religious denominations were all turned into eyes, each to watch against encroachments upon itself, or favoritism toward others. Sordid men anticipated the expenditures incident

* Dr. William E. Channing was the only man, among his friends and acquaintances, who did not dissuade him from accepting the office. He wrote to him as follows:—

My Dear Sir:—I understand that you have given yourself to the cause of education in our commonwealth. I rejoice in it. Nothing could give me greater pleasure. I have long desired that some one uniting all your qualifications should devote himself to this work. You could not find a nobler station. Government has no nobler one to give. You must allow me to labor under you according to my opportunities. If at any time I can aid you, you must let me know, and I shall be glad to converse with you always about your operations. When will the low, degrading party quarrels of the country cease, and the better minds come to think what can be done toward a substantial, generous improvement of the community? "My ear is pained, my very soul is sick" with the monotonous yet furious clamors about currency, banks, &c., when the spiritual interests of the community seem hardly to be recognized as having any reality.

If we can but turn the wonderful energy of this people into a right channel, what a new heaven and earth must be realized among us! And I do not despair. Your willingness to consecrate yourself to the work is a happy omen. You do not stand alone, or form a rare exception to the times. There must be many to be touched by the same truths which are stirring you.

My hope is that the pursuit will give you new vigor and health. If you can keep strong outwardly, I have no fear about the efficiency of the spirit. I write in haste, for I am not very strong, and any effort exhausts me, but I wanted to express my sympathy, and to wish you God speed on your way.

Your sincere friend, WM. E. CHANNING.

to improvement. Many teachers of private schools foresaw that any change for the better in the public schools would withdraw patronage from their own; though to their honor it must be said that the cause of public education had no better friends than many private teachers proved themselves to be. But hundreds and hundreds of wretchedly poor and incompetent teachers knew full well that the daylight of educational intelligence would be to them what the morning dawn is to night-birds. Bookmakers and booksellers were jealous of interference in behalf of rivals; and where there were twenty competitors of a kind, Hope was but a fraction of one-twentieth, while Fear was a unit. Mr. Mann for many years had filled important political offices; and, if political opponents could not find any thing wrong in what he was doing, it was the easiest of all things to foresee something wrong that he would do. Many persons who have some conscience in their statements about the past, have none in their predictions about the future. And however different and contradictory might be the motives of opposition, all opponents would coalesce; while the friends of the enterprise, though animated by a common desire for its advancement, were often alienated from each other through disagreement as to methods. There was also the spirit of conservatism to be overcome; and, more formidable by far than this, the spirit of pride on the part of some in the then existing condition of the schools,—a pride which had been fostered for a century among the people, not because their school system was as good as it should and might be, but because it was so much better than that of neighboring communities. And, besides all this, it was impossible to excite any such enthusiasm, for a cause whose highest rewards lie in the remote future, as for one where the investment of means or effort is to be refunded, with heavy usury, at the next anniversary or quarter-day. Then questions respecting the education of a whole people touched the whole people. Politics, commerce, manufactures, agriculture, are class interests. Each one is but a segment of the great social circle. While the few engaged in a single pursuit may be intensely excited, the great majority around may be in a state of quiescence or indifference. But, so far as education is regarded at all, it is a problem which every body undertakes to solve; and hence ten thousand censors rise up in a day. It is an object not too low to be noticed by the highest, nor too high to be adjudicated upon by the lowest. Do not these considerations show the multifarious relations of the cause to the community at large, and to the interests and hopes of each of its classes? And now consider the things indispensable to be done, to superinduce a vigorous system upon a decrepit one,—changes in the

law, new organizations of territory into districts, the building of school-houses, classification of scholars, supervision of schools, improvements in books, in methods of teaching, and in the motives and ways of discipline, qualifications of teachers, the collection of statistics, the necessary exposure of defects and of mal-administration, &c., &c.,—and we can form a more adequate idea of the wide circuit of the work undertaken, and of the vast variety of the details which it comprehends.

Mr. Mann, in entering on his work, availed himself of three modes of influencing the public. 1. By lectures addressed to conventions of teachers and friends of education, which were held at first annually in each county of the state. It was made his duty, as secretary, to attend these conventions, both for the purpose of obtaining information in regard to the condition of the schools, and of explaining to the public what were supposed to be the leading motives and objects of the legislature in creating the Board. His addresses, prepared for these occasions, and for teachers' associations, lyceums, &c., were designed for popular and promiscuous audiences, and were admirably adapted to awaken a lively interest, and enlist parental, patriotic, and religious motives in behalf of the cause. 2. In the Report which he was required annually to make to the Board of his own doings, and the condition and improvement of the public schools, he presented more didactic expositions of the wants of the great cause of Education, and the relations which that cause holds to the interests of civilization and human progress. 3. In the "*Common School Journal*," which he conducted on his own responsibility, he gave more detailed and specific views, in regard to modes and processes of instruction and training, and the general management of schools.

Of his numerous lectures, seven were published in a volume,* prepared for the press, by a special request of the Board, in 1840. These lectures alone would establish for him a permanent reputation as an eloquent writer, and profound thinker, in this department of literature. But his twelve Annual Reports constitute an enduring monument of well-directed zeal in the public service, and of large, comprehensive, and practical views of educational improvement, and of his power as a master of the English language. We shall, in justice to Mr. Mann, and for the valuable suggestions which even an imperfect analysis of these remarkable documents must impart, pass them in rapid review.

* Lectures on Education, by Horace Mann, pp. 338. *Contents.*—Lecture I. Means and Objects of Common School Education. II. Special Preparation, a prerequisite to Teaching, III. The Necessity of Education in a Republican Government. IV. What God does, and what He leaves for Man to do, in the work of Education. V. An Historical View of Education; showing its dignity and its Degradation. VI. On District School Libraries. VII. On School Punishments.

Analysis of Mr. Mann's Reports as Secretary of the Massachusetts Board of Education.

In his first report, submitted less than five months after his acceptance of the post of Secretary of the Board of Education, Mr. Mann presented a comprehensive survey of the condition of the public schools of the state, under four heads; viz., I. The situation, construction, condition, and number of the school-houses; to which he devoted a supplementary report, with a free exposition of his views in regard to ventilation and warming, size, desks, seats, location of school-houses, light, windows, yards or playgrounds, and the duty of instructors in regard to these structures. These were accompanied with two plans of the interior of school-houses. II. *The manner in which the school committees performed their duties.* Under this head he specified their neglect in regard to the time of examining teachers, the character of the examinations, the hesitation in rejecting incompetent candidates; their neglect of the law requiring them to secure uniformity of school books, and furnishing them to the scholars at the expense of the town, when the parents neglected to furnish them—their negligence in not enforcing attendance, regularity, and punctuality, and in not visiting the schools as the law demanded. The causes of this neglect, want of compensation, and consequently of penalty for non-performance of duties, the hostility often induced by a faithful performance of duty, and the ingratitude with which their services were treated, thus preventing the best men from accepting the office. Remedies for these evils were also suggested; viz., compensation for services, penalties for neglect, and an annual report by each committee. III. *Apathy on the part of the community* in relation to schools. This is of two kinds. The apathy of those indifferent to all education, which, in the influx of an ignorant and degraded population, would naturally increase; and apathy toward the public or free schools, on the part of those who considered them as not supplying the education needed, and hence sought to procure that education for their children, in academies and private schools. Under this head, he propounded the true theory of public schools, the measures necessary to secure their efficiency, and the objections to private schools as means of popular education. IV. *Competency of Teachers.* The obstacles to this competency were considered; viz., low compensation, preventing its being followed as a profession; the low standard of attainment required; and the ulterior objects of those who engaged in it temporarily. With a few remarks concerning the necessity of school registers, apparatus, &c., and the best time for the election of school officers, the report closed.

Mr. Mann's second report, after briefly reviewing the evidences of progress in Nantucket, and some other large towns, during the previous year, and the delinquencies of others, is mainly occupied with the discussion of the importance of better instruction in language, in the public schools, and the best methods of effecting it. The existing methods of instruction in spelling and reading are described, their defects noted, and the measures proposed for remedying them mentioned. The teaching of the young child words before letters (a plan previously advocated by Dr. Gallaudet,) is strongly recommended, and cogent reasons given for its adoption. The faulty character of the selections in school reading-books, are noticed, their want of connection and interest to the pupil, the utter unintelligibility of many of them; spellers and definers discarded as suitable means of giving children ideas of the meaning of words; dictionaries for study, regarded

as better, but still exceptional—the preparation of readers, detailing in simple and interesting style, events of home life—popular treatises on natural science—voyages and travels and, as the vocabulary of the pupil increases, and his perceptions of matters of argument and reason increases, the advance to the discussion of higher topics may be encouraged. Compositions, translations, and paraphrases, should be required early, and generally should be of a descriptive rather than a didactic character. The effects of this method of instruction are portrayed in the vivid language of the secretary—its elevation of the taste, refinement of the manners, and the preparation which it would give the community for the enjoyment of a higher and purer literature. With a brief discussion of the question whether the Board of Education should recommend a series of school books, and some incidental allusions to matters of detail, the report closes.

Mr. Mann commences his THIRD REPORT with congratulations to the Board of Education, on the evidences of progress and improvement evinced by the school returns, and other facts which he lays before them; and, after stating briefly the efforts made for the instruction of children on the lines of railroad then in course of construction, and the number and character of the violations of the laws relative to the employment of children in manufactories, without giving them opportunities of education, he proceeds to discuss, in all its bearings, the necessity of libraries in school districts. He gives at length, statistics, carefully collected, relative to the number, character, and accessibility of the existing libraries in the state, showing that there were in the state, including college, society, theological, and other public libraries, some 300,000 volumes; that the use of them was confined to not over 100,000 persons, while 600,000 had no access to them—that one hundred towns of the state had no public libraries of any description; that of the books in the libraries, very few, not over one-twentieth, were adapted to the use of children, or young persons; that many of them were out of date, old, and incorrect; that the greater part of those in circulation were works of fiction, and many of them of injurious or immoral tendency, while a few were composed mainly of historical and scientific works. Other facts are stated, showing the prevalent tendency in the popular mind, to read only, or mainly, works of fiction and amusement. The mental and moral influence of various descriptions of reading, is next fully discussed. The effect of reading, in the formation and development of character illustrated. Statistics are next given of the lyceum and other lectures, maintained in the state, their advantages and disadvantages are shown, and the impossibility of their acting as substitutes for libraries, in the work of public instruction, fully demonstrated. The reasons why school district libraries should be established, and at the expense of the state, in part, are forcibly stated—the density of the population, the necessity for high education to sustain such a population—the advantages of the subdivision of districts, in carrying libraries to every man's neighborhood—the inability of the small districts to compete, unaided, with the larger, in supplying themselves with libraries, yet their greater need of them, from the brevity of their period of school sessions, are all urged. The character of the books necessary for such libraries, is then dwelt upon; natural science, biography, well-written history, agricultural and popular scientific works—works on physiology and hygiene, on morals and their applications—and, when practicable, biographical dictionaries, encyclopedias, and other works of a similar character, as reference books, are specified. The general demand for libraries, throughout the state, is noticed in conclusion.

In his FOURTH REPORT, Mr. Mann, after a brief general review of the gratifying progress of the state, in educational matters, in the three years preceding, and a portrayal of the material advantages which would ensue from the publication and circulation of the abstracts of the school reports, enters upon a full discussion of the topics suggested by these reports, prefacing it by a brief account of the principles on which schools have been supported since 1647, in Massachusetts.

The topics treated are the following: school districts—the evils of their minute subdivision—the remedies suggested are the reunion of small districts, the placing the whole management of the schools, where it was placed originally, in the hands of the towns, and the organization of union schools for the older scholars. The last measure is urged on the grounds of the economy of the plan, and the advantage gained in management and discipline; the condition and repair of school-houses is next considered, and a tax suggested, once in three or five years, to furnish means to the committee to keep the school-house in good repair. The inefficiency and unproductiveness of expenditure for public instruction, is next dwelt upon—the statistics of private school expenditure for instruction, in the branches taught in the public schools, given; its wastefulness shown; the greater advantages which would result from the expenditure of the same sum on the public schools, demonstrated; and the moral evils which the present course causes, exhibited. The suggestions of the reports in regard to *teachers*, are then considered. The advantage of increasing the number of female teachers, discussed; the deficiencies in the qualifications of those examined, commented upon; and the necessity of their possessing a thorough knowledge of common school studies, aptness to teach, ability in management and discipline, good manners, and unexceptionable morals, urged. The necessity of strict uniformity in school books, is demonstrated; the advantages arising from the introduction of school apparatus and school libraries, mentioned; constancy and punctuality of attendance urged, on the grounds of the monstrous loss and waste of time and money which are involved in irregularity and absence; and the fearful deprivation of the best hours of life to the young, a loss not to be repaired. The enforcement of regular and punctual attendance is advised, by the efforts of the teachers to attach children to the school, by the use of the register, the notification of parents, the example of the teacher, and appeals to parents and guardians to encourage it. The duties of superintending or town committees, and of prudential committees, are briefly considered; manifestation of parental interest in the schools, the evils of forcible breaking up the schools, and of absences from final examinations, referred to; and the report closes with a general retrospect.

In his FIFTH REPORT, Mr. Mann, after his usual resumé of the results attained the previous year, and a few remarks on the advantage of increasing the number of meetings, and multiplying the points at which conventions of the friends of education should assemble, and some passing notice of the improvement in school districts, school-houses, appropriations of money by the towns, amount and regularity of attendance, length of schools, and uniformity of school books, discusses at length the best methods of ascertaining the qualifications of teachers for their work, a duty devolving, by law, on the town or superintending committees. Under the head of moral character, he recommends, where the candidate is not previously known to the committee, strict scrutiny of his credentials, and a registry of the names of those who recommend them, and denounces, in the strongest terms, those who would be guilty of furnishing recommendations to persons

morally disqualified for the high calling of teachers of youth. Passing over the matter of the scholarship of the teacher, which can generally be ascertained without much difficulty, he next considers the best method of ascertaining the ability of the teacher to impart knowledge, and his capacity for managing and governing a school—points of great importance, but which many of the school committees had declared impossible to be ascertained. In regard to the first, he recommends that the candidate should be questioned on his method of using the blackboard, his mode of teaching reading, whether he requires the children to understand the meaning of the words, and the sense of the passage read, his instruction in pronunciation, his time and method of teaching the arithmetical signs, his mode of instructing in geography, grammar, and arithmetic, his practice in regard to reviews, alternations of studies, &c. In relation to his ability to manage and govern a school, he suggests inquiries into his methods of preserving order and quiet in his school; his views relative to the necessity and frequency of corporeal punishment; his practice in exciting emulation by prizes, &c. He also suggests that inquiry should be made in regard to the special preparation made by the candidate for teaching, what instruction he has received on the art of teaching, either in normal schools, or from books or teachers' periodicals. Some further suggestions are thus made relative to the details of the examination of teachers.

The two Shaker societies had the previous year refused to allow their teachers to be examined, or their schools visited. The secretary shows, with great force, the absurdity of their course, and then passes to illustrate, by means of statistics and otherwise, the inequality in the means of education in different towns in the state. The facts being stated, he demonstrates by irrefragible arguments, and by the testimony of several of the largest employers of labor in the commonwealth, the difference which this inequality of education makes in the productive value of the labor of the educated and uneducated. He thus shows, conclusively, that the state and individuals would be very greatly the gainers, in a pecuniary sense, by the universal diffusion of education. That a person with a good common school education will, in the same business, ordinarily earn fifty per cent. more than one without education—and this with less injury or expense of tools or machinery; and that such persons usually live better, and are better members of society. The argument is an admirable one.

In his SIXTH REPORT, Mr. Mann passes in review the progress of the preceding year, in the school appropriations, the attendance, vacations in the annual schools, employment of female teachers, compensation of teachers, reports of school committees, breaking up of schools, qualifications of teachers, dismission of incompetent teachers, school registers, and school district libraries; and proceeds, under the head *of selection of studies*, to urge the importance of the introduction of the study of physiology into the schools. To do this effectually, he goes at considerable length into a statement and illustration of the laws of life and health, and the daily and hourly violations of them by the masses. He also submits the opinions of eminent physicians in regard to the importance of the study of physiology and hygiene to the young, and enforces these opinions by further argument and illustration. This portion of the report furnishes, in itself, an admirable essay on physiology and hygiene, and is well worthy of perusal and study.

Mr. Mann, in his SEVENTH REPORT, after his customary review of the condition of the schools of the state, proceeds to give an account of the observations made

in his European tour of the preceding year, in which he had visited a large number of schools in England, Ireland, Scotland, Prussia, Germany, Holland, Belgium, and France. He visited not only the public schools of these countries, but their institutions for the blind, deaf mutes, orphans, vagrants, and juvenile offenders, also. Leaving these topics, however, Mr. Mann comes again upon his own appropriate ground, and considers the fearful evils of a partial system of education, as exhibited in England, giving numerous facts demonstrating the great inequality of the opportunities of education, the disproportion in the salaries of teachers, the vile and often degrading and obscene books used in the lowest class of schools, and the necessity of a general supervisory power on the subject of education. The school-houses, with the exception of some of the palaces devoted to private or endowed schools in England, he regarded as decidedly inferior to those of Massachusetts, in convenience and in ventilation. The reading-books, especially in Germany, were better than ours, as being more practical in their character. There was but little more apparatus there than here. The blackboard was universally used, and for more purposes than here. In some schools he found the standard weights and measures of the country—a valuable aid to the understanding of the comparative quantities contained in them. In some of the schools, as in Holland, there were cards containing fac-similes of the coins of the realm; reading boards or frames (since introduced here,) were also found there. Models of implements of utility, collections of shells, minerals, seeds, woods, &c., and occasionally paintings of considerable value; and, in nearly all, tasteful though cheap engravings and maps adorned the walls. The Lancasterian schools he found upon the wane, a "more excellent way" having been substituted for them. He was much pleased with the mental activity displayed in the Scotch schools, and with the thoroughness of their training in reading, and in exercises in language, but thought there was too much harshness, and too strong appeals to emulation in their management.

But the Prussian schools were, in his view, superior to any others he saw in Europe. After reviewing briefly the orphan and vagrant schools of Potsdam, Halle, and Horn, giving to the apostolic Wichern his due meed of praise, he proceeds to treat of the classification of the Prussian schools, the method of teaching in the primary classes; and here he urges with great force the advantage of the system adopted there of teaching words before letters. He also suggests that the phonic or *lautir* method of spelling, which he found in use in Prussia, might with advantage be adopted here. After a brief reference to the way in which reading is taught in the higher classes, he proceeds to speak of their methods of instruction in arithmetic and mathematics, in grammar and composition. In writing and drawing, in geography, by the sketching of outlines on the blackboard; in thinking exercises, knowledge of nature, the world, and society; alluding, under these heads, to the careful and thorough preparation of the teachers for their work of instruction, and the entire absence of text-books, in instruction in Bible history and music, which he found universally taught in Prussia. He next gives an account of the seminaries for teachers, the preliminary course in which their eligibility to become members of the seminaries for teachers was decided, the course of instruction, its extreme thoroughness, and the high moral and religious tone of the instruction. In reviewing the period spent in Prussia and Saxony, he states these facts, viz., that he never saw a teacher hearing a lesson with a book in his hand; he never saw a teacher sitting; and he never saw

a child either arraigned for punishment, undergoing it, or having recently been punished. He does not intend to imply, by the last remark, that corporeal punishment was entirely discarded, but that it was very seldom necessary to resort to it. The earnestness and interest of the teachers in their work, their evidently strong affection for their pupils, and the reciprocal affection engendered by this, were generally sufficient to produce obedience. Educational journals he found abundant, and well sustained. The school inspectors were men of high attainments, and qualified to fill the highest stations. School attendance was made compulsory by law, the parent being imprisoned if he neglected to send his child, after repeated warnings—but so well were the parents convinced of its advantages, that it was seldom necessary to appeal to the law. Mr. Mann next gives a brief account of the higher schools (the real and burger schools,) of Prussia and Saxony; and assigns the reasons why, though the young are thus educated, yet the nation is in a condition of such apathy.

He then proceeds to review some points, in the schools of other countries which he visited. Corporeal punishment was not used in Holland. In Scotland and England, on the contrary, it was in full force; and, in some of the proprietary and endowed schools of England, solitary confinement still prevailed. In France, he found the system of *surveillance* in force in the boarding-schools and colleges—the watching being as close as in a prison. Emulation is an incentive in the English and Scotch schools, of all grades; and is allowed, though not extensively practiced, in the Prussian and Saxon schools. Its application to religious instruction and attainment, Mr. Mann thinks highly objectionable. The religious instruction, both in Great Britain and on the continent, is for the most part sectarian—a measure fraught with many and great evils, not the least of which are its political results. Mr. Mann closes with some eloquent reflections on the reasons we have for thankfulness that our lot was not cast among the effete, worn-out nations of Europe; but that here civilization could have new opportunities of trial, unembarrassed by prescriptive rights, hereditary nobility, an absolute government, feudalism, or pauperism; and sums up with this great truth, that "*In a republic, ignorance is a crime; and that private immorality is not less an opprobrium to the state than it is guilt in the perpetrator.*"

In his EIGHTH REPORT, after giving his usual statistics of the advance in the cause of education in the state, and a few remarks on the increasing employment of female teachers, the enlarged amount of town appropriations, the gratifying increase in the number of school libraries, and the painful necessity of breaking up schools from the incompetency of teachers, he advocates, at some length, the organization of teachers' institutes (which had already been established in New York,) and recommends an appropriation for the purpose; he also notices, with approbation, the organization of county and town teachers' associations, suggests that school registers should hereafter be provided, in book form; specifies the results of an inquiry into the number of towns in which the Bible is not used in the schools; and notices the causes which led to the removal of one of the state normal schools from Lexington to West Newton. He then proceeds to discuss the question of the *distribution of the school moneys among the districts*, giving statistics of the methods heretofore adopted, which were exceedingly various; and, without entering into details, urging the view that the distribution should be made in such a way as to give equal advantages to each district. This does not necessarily require an equal expenditure in each; for one school may be large

and require one or more assistants, another may be small and require but one teacher; one may be composed mostly of large scholars and require a male teacher, another of small scholars and be benefited by having a good female teacher. Connected with this subject is the question of the power of the towns to raise money for school purposes, beyond the minimum required by the statute. Mr. Mann defends the liberal construction of the statute; not only from motives of humanity and philanthropy, but from the evident design of the law-makers, as demonstrated from other enactments bearing upon the question. Another point considered in the report, is the *teaching vocal music* in the schools. He states that about five hundred, or nearly one-sixth of the schools in the commonwealth have already adopted the practice of singing in school; and urges the importance of its universal adoption, from the natural taste for it in all classes, from its refining, softening, and purifying power, from the excellent results which it has produced in other countries, and in our own wherever it has been introduced, for its promotion of health, as furnishing the means of intellectual exercises, and for its social and moral influence. He quotes also the opinions of Dr. Chalmers, and of Napoleon, in regard to the power of music in controlling men. Having thus demonstrated the desirableness of this addition to school instruction, he proceeds to consider the means of accomplishing the object. He suggests that the ability to sing should, as far as possible, be made one of the qualifications of the teacher; and that, where this is impracticable, in the larger towns, a teacher should be hired, and in the smaller towns, benevolent persons, accomplished in the art, should volunteer to bestow instruction.

The NINTH REPORT commences with some statistics of great interest; one table, showing that there were but twenty-two towns in the commonwealth which had not availed themselves of the state provision for school libraries; another showing the progress of the school fund for ten years; a third giving the amount raised by the towns for school purposes, showing that the expenditure for schools, per annum, was more than one dollar for every inhabitant. The usual statistics in regard to length of schools, attendance, &c., are given; and the necessity of enforcing a more full and punctual attendance, urged with great earnestness and eloquence. The compensation of teachers is next considered, and the secretary urges the necessity of increased compensation, and a higher standard of qualification, especially for female teachers; on the ground of the severity and responsibility of their duties, the cost of training, and the fact that the best talent is now drawn away to private schools and seminaries, in other states, by the higher compensation offered them. The advantages of the new school register are pointed out; the cases in which schools were broken up through the incompetency of the teacher, or other causes, which had largely increased under the new law of the previous year, are next analyzed; the number of new teachers, and the comparatively small number who make teaching a profession, are noticed; an interesting narrative is given of the holding of the first teachers' institutes, whose organization was due to the liberality of Hon. Edmund Dwight; a retrospect of the year, its progress, and its signs of promise, are recorded; and Mr. Mann proceeds to discuss the duties of the state for the future, in the cause of education.

In connection with this subject, he speaks at considerable length of *school-motives*, and of some means for avoiding and extirpating *school vices*. Under these heads, he considers, first, the character, duties, and qualifications of the school

committees, urging the importance of their placing moral improvement, in their examinations of the school, in at least equal rank with intellectual progress, and that they should discountenance the effort on the part of teachers to encourage intellectual progress, at the expense of moral culture, or the development of the evil passions of our nature. He next passes to the motives that should actuate the teacher. He must not be a hireling. He must love children and love his work. The contemplation of his work, in its ever-changing character, and its beneficence should constantly excite him to new zeal, and exhilarate his spirits; if it do not, he is unfit for his work. He should enter the school-room as the friend and benefactor of his scholars; should aim to secure their good-will; should lead, not drive. Order must be maintained, but it should be maintained from reverence and regard for the teacher, and not from fear. No code of laws should be enacted, but every act should be submitted to the conscience of the school. *Is it right?* not *Is it written?* should be the question to be propounded by each scholar to his own conscience. It would be well for the teacher to speak of the duties to be done, of the reasons and rewards appertaining to them, rather than of offenses and their punishments. The moral instruction given by the teacher should have reference to their duties in school and at home; the duty of cultivating the spirit of honor and kindness to each other; the desire of aiding each other's improvement; the cowardice and meanness of attributing to others our own faults and offenses; the despicable character of falsehood and deception, &c., &c.

The government of the school is next considered; the influence of the fear of punishment, and of the restraint of higher motives, is compared; and, though corporeal punishment may be necessary in extreme cases, it should be abandoned when higher motives can be brought to bear upon the pupil. Fear is neither *curative* nor *restorative;* it is, at some times and in some cases, preventive, and hence should not be proscribed from the teacher's list of motives, but when both teacher and pupil reach that higher plane of action, for which, we are striving, we may hope to substitute love and duty for it. In this connection, Mr. Mann expresses himself decidedly opposed to the practice of expelling refractory and disobedient children from the school; they should be retained and subdued. In the exercises of the school-room, every true teacher will consider the train of *feeling*, not less than the train of *thought*, which is evolved; and the importance of being alive to the bearing and influence of them upon the character of his pupils can not be overrated.

Imperfect recitations, and their penalties, may exert an unhappy influence. The teacher should not induce them by giving too long lessons, and he should not suffer any scholar habitually to break down in recitation; and, above all, a class should not be allowed to do so, from the loss of the sense of shame, contempt for the study, and recklessness, which would follow. The other temptations in regard to lessons are next considered, and the means of obviating and overcoming them stated. The slurring or shirking lessons, the acted falsehood of procuring others to do the work, and then presenting it as the pupil's own, the prompting others at recitation, and the relying on others to prompt one, and the evils which follow from them, and the best means of preventing them, are fully stated. The use of keys, or answers, in mathematical studies, is also condemned, not more for the ignorance of the principles of mathematics which it exhibits, than for the deception and falsehood which it inevitably occasions; and the teacher

is recommended to give out original questions and problems, to thwart the practice.

The prevention of whispering, and other forms of communication, is the next topic considered, and the various methods taken to prevent it are discussed, and the moral danger attendant upon some of them noticed. The intense occupation of the pupils, and the elevation of the moral standard to such a tone as shall array the moral force of the pupils against whispering, and in favor of self-denial, are commended as the most effectual preventive.

Truancy is another school-vice to be overcome. This can be done by rendering the school attractive, by careful and accurate registration, and by frequent conference with parents. The *motives* to be brought to bear on children are numerous. The objects of knowledge should be made attractive, both by their order of presentation and the manner of exhibiting them; this requires high powers and attainments on the part of the teacher. Fear, ambition, emulation, if used as motives, must be used sparingly, and with a full consciousness of the evils which would result from their excessive application. The relative rank which is assigned to mental and moral qualities in the teacher's mind, will determine the propriety or impropriety of using emulation as an incentive. With some appropriate remarks on the preparation for school examinations, showing the necessity of their being only the measure of the actual progress of the pupils in knowledge, and some admirable suggestions on the possibility of inculcating moral lessons through intellectual exercises, and a contrast of the inductive with the dogmatic method of instruction, this able report closes.

Mr. Mann's TENTH REPORT commences with the announcement of some cheering facts relative to the advancement of the cause of education in the state. The amount appropriated by the towns for the support of schools, had risen from $400,000, in 1837, to $620,000, in 1845. The number of female teachers employed had increased from 3591 to 4997, while the number of male teachers was only 215 more than nine years previous. More than $1,200,000 had been expended during the same period for the erection and repair of school-houses; the amount of apparatus had increased a hundred fold; the methods of instruction, through the influence of normal schools and teachers' institutes, and the greater strictness of examinations, had been greatly improved. Examinations both of teachers and schools had been conducted, in many instances, by written or printed questions. The government and discipline of the schools had been much improved; induced by a higher degree of competency on the parts of the teachers, more careful examination of the teachers, and visitation of the schools, and deeper interest on the part of parents; five hundred schools, almost one-sixth of the entire number, had been taught, and well taught, without a resort to corporeal punishment. The aggregate attendance had been a little advanced, though too little; and the average length of the schools had increased, since 1837, fifteen per cent. The circulation of the school abstracts had accomplished a vast amount of good, and the teachers' institutes and normal schools, were well attended, and were qualifying a better class of teachers for the state.

Having stated these encouraging facts, Mr. Mann next proceeds to give some account of the Massachusetts school system, commencing with the history of its origin and the arguments for a system of *free schools*. He specifies, first, the argument adduced for it by its early founders,—the necessity of universal education for the promotion of the Protestant faith,—an insufficient argument, because on

that ground the Romanist should oppose it; next, the argument that it was necessary for the preservation and perpetuity of republican institutions; this, too, an untenable ground, as a monarchist should, in that case, be opposed to it; the argument of the political economist, and of the moralist, who extends the positions of the economist, are next stated; and Mr. Mann proceeds to defend free schools, by an argument resting on higher grounds than either. Laying down the postulate that every child of the human family has the same right to an education that he has to inhale the air which keeps him in life, or to enjoy the light of the sun, or to receive that shelter, protection, and nourishment, which are necessary to the continuance of his bodily existence, he proceeds to defend this postulate by the following argument. Property, whether real or personal, has for its main, primary, and natural elements and ingredients, the riches of the soil, the treasures of the sea, the light and warmth of the sun, fertilizing clouds, streams, and dews, the wind, and the chemical and vegetative agencies of nature. But these are the gifts of God, not to individuals, but to the race; hence the individual can have but a life tenure, and is bound to transmit the property thus acquired, not only unimpaired, but improved, to the next generation. Again, of that portion of property which may be said to be the direct result of human toil, how very small a portion is there, for which the present generation is not indebted to those which have preceded it; our government, laws, institutions, our houses, roads, churches, the arts, sciences, discoveries, and inventions, by which we are enabled to apply labor profitably, were all, or most of them, handed down to us by those who have preceded us; and we are but the trustees of the accumulations of the ages to those who shall come after us. It follows from these premises that the next generation have a claim on that which we hold as property, such as the ward has upon the guardian, and hence there is an obligation on us to qualify those yet in their minority, for their future inheritance, and they have a right to the use of so much of their future inheritance as may be necessary thus to qualify them, before they come into full possession. Mr. Mann illustrated this also in other ways, as by the case of several proprietors of land on the same stream, where those above can not corrupt, or injure the quality, or diminish the quantity, of water to which those below are entitled, and thus the occupant below has some claim upon the waters above, before they reach his land; or, in the case of persons occupying the same vicinity, one can not injure or vitiate the quality of the atmosphere, which the others are to breathe. He sums up the argument as follows: "The successive generations of men, taken collectively, constitute one great commonwealth."

The property of this commonwealth is pledged for the education of all its youth, up to such a point as will save them from poverty and vice, and prepare them for the adequate performance of their social and civil duties.

The successive holders of this property are trustees, bound to the faithful execution of their trust by the most sacred obligations; because embezzlement and pillage from children and descendants, are as criminal as the same offenses, when perpetrated against contemporaries. Having thus laid his foundations broad and deep, he proceeds to show how the free school system of Massachusetts is reared upon them; giving first the constitutional provision relative to free schools, and then, under the following heads, in popular language, the substance of the legal enactment, and decisions bearing on the subject. Territorial organization of the state, duty of towns to maintain schools (giving under this head the decision

of the supreme court in the case of Cushing *vs.* Inhabitants of Newburyport,) school districts, prudential committees, district school-houses, school district taxes, contiguous school districts, in adjoining towns, union school districts, school committees, duty of the town committee to provide a school when the prudential committee fails to do so, duty of the town committee in regard to schools kept for the benefit of all the inhabitants of the town, visitation of schools, school-books, religious liberty, teachers, Board of Education, school registers, inquiries and returns, committees' reports, school abstracts, reports of the Board of Education, apparatus, district school libraries, state normal schools, teachers' institutes, penalties for not providing and for withholding the means of education, aids and encouragements to education, provision for answering the requests of other states and countries.

With an eloquent peroration on the results which have already been realized from this general diffusion of education in the state, Mr. Mann closes this long and able report, occupying in all nearly 300 pages.

The ELEVENTH REPORT announces an advance of more than $50,000 over the preceding year in the appropriations for the support of schools, an increase of 241 in the number of female teachers employed, and an advance in the monthly stipend paid to both male and female teachers; which, however, especially in the case of females, it still pronounces far below what it should be, and urges a decided increase. The schools were held an average period of eight months, and the attendance was also increasing. The tables in the school abstracts had been prepared by the secretary, and an important one added, arranging the towns in the state in the order of their merit or delinquency in regard to attendance of scholars; thus demonstrating an important fact, that the attendance was much better in the scattered rural districts than in the cities and large towns. In this connection he suggests the importance of a change in the apportionment of the income of the school fund, bestowing it according to the actual attendance upon the schools, and urges some potent reasons for such a measure; he refers to an error in the act of 1847, relative to the forwarding reports and returns by the school committees, suggests some improvements in regard to holding teachers' institutes, and to the condition of the state normal schools, &c., and then proceeds to discuss a topic which he deems of vital interest to the state, viz., *The power of common schools, if under proper management and control, and attended by all the children of the state, to redeem the state from social vices and crimes.* During the preceding year, Mr. Mann had addressed a circular to John Griscom, Esq., an eminent teacher and reformer, David P. Page, Esq., of the New York State Normal School, Solomon Adams, Esq., Rev. Jacob Abbott, F. A. Adams, Esq., E. A. Andrews, Esq., Roger S. Howard, Esq., and Miss Catherine E. Beecher, all distinguished and experienced teachers, in which, after stating that he regarded high moral qualifications as an essential to successful teaching, he had propounded the following queries:—

1. "How many years have you been engaged in school-keeping; and whether in the country, or populous towns, or cities?"

2. "About how many children have you had under your care; of which sex, and between what ages?"

3. "Should all our schools be kept by teachers of high intellectual and moral qualifications, and should all the children in the community be brought within these schools for ten months in a year, from the age of four to that of sixteen years; then what proportion,—what per centage,—of such children as you have

had under your care, could, in your opinion, be so educated and trained, that their existence, on going out into the world, would be a benefit and not a detriment, an honor and not a shame, to society? Or, to state the question in a general form, if all children were brought within the salutary and auspicious influences I have here supposed, what per centage of them should you pronounce to be irreclaimable and hopeless? Of course, I do not speak of imbeciles or idiots, but only of rational and accountable beings."

The persons to whom these inquiries were addressed, were all believers in the Calvinistic doctrine of total depravity, and a transmitted sinful nature, so that no theory of the innate goodness, or perfectibility of human nature, could have influenced their opinion, yet there is a wonderful unanimity in the views they expressed. Mr. Griscom, a cautious, careful member of the Society of Friends, a teacher for forty-two or forty-three years, replied: "My belief is that, under the conditions mentioned in the question, not more than two per cent. would be irreclaimable nuisances to society, and that ninety-five per cent. would be supporters of the moral welfare of the community in which they resided. * * * * * Finally, in the predicament last stated in the circular, and supposing the teachers to be imbued with the gospel spirit, I believe there would not be more than *one half of one per cent.* of the children educated, on whom a wise judge would be compelled to pronounce the doom of hopelessness and irreclaimability."

Mr. Page says, under the circumstances stated, "I should scarcely expect, after the first generation of children submitted to the experiment, to fail, in a single case, to secure the results you have named."

Mr. S. Adams says: "So far as my own experience goes, so far as my knowledge of the experience of others extends, so far as the statistics of crime throw any light on the subject, I should confidently expect that ninety-nine in a hundred, and I think even more, with such means of education as you have supposed, and with such divine favor as we are authorized to expect, would become good members of society, the supporters of order and law, and truth and justice, and all righteousness."

Rev. Jacob Abbott replies: "If all our schools were under the charge of teachers possessing what I regard as the right intellectual and moral qualifications, and if all the children in the community were brought under the influence of these schools, for ten months in the year, I think the work of training up *the whole community* to intelligence and virtue, would soon be accomplished, as completely as any human end can be obtained by human means."

Mr. F. A. Adams had met with but two boys, out of nearly four hundred, who had been under his care, of whose correct conduct, under the circumstances supposed, he would have any doubt; and even them he could not regard as utterly irreclaimable.

Mr. E. A. Andrews replies: "On these conditions, and under these circumstances, I do not hesitate to express the opinion that the failures need not be,—would not be,—one per cent."

Miss Beecher says: "Let it be so arranged that all these children shall remain till sixteen, under their teachers, and also that they shall spend their lives in this city (*i. e.* the city where they had been taught,) and I have no hesitation in saying, I do not believe that *one*, no, *not a single one*, would fail of proving a respectable and prosperous member of society; nay, more, I believe every one would, at the close of life, find admission into the world of peace and love."

Having obtained such weighty evidence in favor of the plan suggested, Mr. Mann proceeds to consider what is necessary to carry it out, and states, as the prerequisites, the advancement of all the teachers of the state to the physical, intellectual, and moral qualifications of those who now occupy the highest rank; and, second, the power of enforcing the attendance of all the children of the state in school ten months in the year, during the period between the ages of four and sixteen. Can these prerequisites be attained? He believes they can, and urges the following considerations. The talent and ability for a supply of such teachers as are required, sufficient for this demand, exists in the state, as is evident from the large number who, entering at first on the teacher's profession, forsake it for those more lucrative, and considered more honorable, and who attain in these high distinction. If the standard of requirements was raised, and the compensation put as high as the average of other professions, the number would soon be sufficient; that the state could afford to do this, is demonstrated from the fact that the expense would not exceed three times what it is now, and the saving effected in the diminution of crime and vice, as is easily proved, would amount to tenfold the cost.

In regard to attendance, he shows that the previous legislation of Massachusetts, and other states, settles the question of the power of enforcing attendance; that in most cases it would be a benefit to the parent, and in all to the child; that in the case of the vicious and indolent parent, who now lives on his child's labor, it is but justice; and in the case of the honest and virtuous poor, to whom it might be a hardship, the state could and should compensate for the loss of service. In regard to the loss of service to the public, he demonstrates that the number employed is comparatively few, and that, in these cases, the more intelligent labor of the educated child, over sixteen years of age, would be sufficiently profitable to compensate for any loss which might otherwise ensue. He then urges, in a most eloquent appeal to the Board, the importance of taking this bold step forward, and securing to the rising generation *Universality of Education.*

Some months prior to the presentation of his TWELFTH AND LAST REPORT, Mr. Mann had resigned his office as secretary of the Board of Education, in consequence of his election to Congress. This report was prepared at the request of the Board, as his farewell address to those with whom, and for whom, he had, for almost twelve years, so faithfully labored.

In this report he reviews his past labors, contrasting the condition of the public schools of the commonwealth, at the time he accepted office, with their present state, enumerating, with a justifiable pride, the doubling of the appropriations for schools, the expenditure of $2,200,000 on school-houses during the period, the rapid increase of female teachers, as indicating the high intellectual culture of the sex, the increase in attendance, the organization and successful operation of the state normal schools and teachers' institutes, the district school libraries, which, in some seven or eight years, had risen from nothing, to an aggregate of more than 91,000 volumes, and the beneficent legislation of the past two years, by which the sphere of the teachers' institutes was enlarged, power given to take land on appraisal for the location of school-houses, the inmates of jails and houses of correction provided with instruction, the idiot and imbecile brought under humanizing and enlightening influences, and the juvenile offender reformed, instead of being brutalized by the associations of a prison. Having thus laid before the Board the existing condition of education in the state, he proceeds, as in his former reports, to discuss a particular topic, or class of topics more at length.

Announcing, as his general subject, "The capacities of our present school system to improve the pecuniary condition, and to elevate the intellectual and moral character of the commonwealth," he proceeds to show the comparative insignificance of Massachusetts with most of the other states in territorial extent; its paucity of mineral resources, and of natural facilities for internal intercourse; its rock-bound and sterile soil, and its political inferiority in the number of its representatives in the national councils; and then, in a passage of rare eloquence and beauty, a regal gem, even among his profusion of brilliant passages, he urges that her very diminutiveness should be a stimulus to higher achievements; and that "the narrow strip of half-cultivated land, that lies between her eastern and western boundaries, is not Massachusetts; but her noble and incorruptible men, her pure and exalted women, the children in all her schools, whose daily lessons are the preludes and rehearsals of the great duties of life, and the prophecies of future eminence,—THESE ARE THE STATE." Developing and applying this idea, he proceeds to consider the common school as the most effective and benignant of all the forces of civilization and progress, and to show how the true business of the school-room connects itself and becomes identical with the great interests of society. He considers, first, the influence of correct views of *physical education*, such as might be disseminated from the school-room. By means of this, life might be prolonged, sickness, insanity, and pain prevented, weakness replaced by vigor, the appetites controlled, and the vices of excess subdued, and the body, God's earthly temple, made fit and seemly for the abode of an indwelling divinity.

Considering next the beneficial effects of a universal diffusion of intellectual education on the community, and especially a community situated like Massachusetts, he shows, by numerous illustrations, that the only efficient preventive of the division of society into a wealthy aristocracy and a poor and dependent laboring class, is that intellectual culture, which shall make the poor in money the equal of the rich, in intellectual power, in inventive genius, and in that skill and creative energy which, whatever may be their employment, will prevent them from remaining in the ranks of the poor. He passes next to the consideration of political education, and its influence in the promotion of wise action, in all that appertains to the government of the state or the nation; in the prevention of arbitrary exactions, of monopolies, of lotteries, and of licenses for the commission of crime; the too frequent administration of the oath, under circumstances inviting perjury; the preservation of the sanctity of the ballot-box; and the inculcation of those great principles of political science, which lie at the basis of all our institutions.

But far higher in importance is moral education. It is a primal necessity of social existence. Educated intellect, uncontrolled by moral principle, would be but the minister of evil. In all the history of man, intellect, unrestrained by conscience, has subverted right, and turned good into evil, until, spite of the restrictions of law, the arguments of the moralist, and the warnings and appeals of the minister of Christianity, it has attained a status so formidable, that some have been ready to give up the world as a total loss, utterly gone to wreck. The attempt to give to all the children of a community a careful moral training has not yet, however, been made; and, till this fails, we need not despair. We have in its favor the strongest testimony of experienced teachers, and, more than this, the declaration of holy writ: "Train up a child in the way he should go, and when he is old he will not depart from it." But to the full consummation of so glorious a result, more is needed than mere training, in morals. *Religious education* is

requisite. By this is meant, not sectarian education, not the teaching after and of this or that denomination, but those great truths of revelation in which all can agree, and which will cause men to know and reverence God, and love their fellow-men. The question how this religious education shall be conveyed to the young, is an important one. It must not be a religion established by government, with its formulas and creeds, for all history shows that this uniformly shelters and encourages the vilest hypocrisy and irreligion. It may not be done by permitting to one sect or another the control of all religious instruction. It can only, in our common schools, be accomplished by putting the Bible, the eternal rule of right, into the hands of the pupils, and causing the teacher, by precept, and above all by example, to enforce and illustrate its blessed teachings.

In this connection, Mr. Mann vindicates, at some length, the Board of Education, and himself, from the charge of encouraging or favoring irreligion, and, as it was charged, with advocating "*godless schools.*" He shows, conclusively, that both the Board and its secretary advocated and urged the use of the scriptures in all the schools, from some of which they had been rejected when he came into office, but were restored at his instance; that he and the Board opposed the teaching of denominational catechisms and sectarian instruction, as being inconsistent with the laws, and deleterious to the best interests, of the schools; and he demonstrates, conclusively, that any other course would have proved ruinous to the schools, of great and lasting injury to the community, and of no benefit even to the parties who urged it.

With a thrilling appeal to the citizens of Massachusetts to act worthy of their fathers, and of the noble destiny which the future has in reserve for them, Mr. Mann closes his report.

In a brief SUPPLEMENTARY REPORT, with his usual thoughtfulness for the welfare of others, he suggests to the Board, that his successor will need an office (which he had never had,) a clerk, and some compensation for his traveling expenses; and incidentally, though with great modesty, he unveils a part of his own arduous labors. He had averaged fifteen hours labor per diem, from the time of taking the office, had never had a day of relaxation, and, we may add, what he did not, had expended more than the half of his salary for the cause of education.

The foregoing brief synopsis of Mr. Mann's twelve annual reports to the Board of Education, will give the reader, who is not familiar with the documents themselves, only a faint idea of the fullness and ability with which the vast details of school organization, administration, instruction, and discipline, are discussed. To be appreciated they must be read; and we know of no series of educational reports, by one mind, in any language, so readable, or so instructive. We hope the author will consent to their republication—or, what will be better, will himself recast the whole into a complete treatise on the public schools of Massachusetts.

NOTE.—The original edition of these reports was long ago exhausted, but all except the 10th, 11th, and 12th, were republished in the "*Common School Journal*," sets of which can still be had. To bring the many valuable suggestions, eloquently expressed, of Mr Mann to the knowledge of our readers, we shall enrich several of the subsequent numbers of our Journal with copious extracts from his publications, arranged under appropriate headings.

In addition to his annual and occasional lectures before county conventions, educational associations, teachers' institutes, and lyceums; and to his annual reports, as secretary, Mr. Mann himself contributed largely to the pages, and superintended the monthly publication, of the "*Common School Journal*," making ten octavo volumes, with which every public library of the country should be supplied, as a valuable part of our educational literature.

No inconsiderable portion of each year was given to the preparation of the Abstracts of the reports and returns of the school committees of the several towns of the Commonwealth—a labor, before his appointment, and since his retirement, performed by a clerk—but which was added to his other duties, and which was cheerfully performed, because of the intrinsic value of the documents thus prepared and published. The real progress and strength of the common school movement, can nowhere be better traced and felt, than in the statistical tables and reports of committees to the several towns, in these abstracts.

Added to all these labors was a correspondence with school officers, teachers, and active friends of educational improvement, both in and out of the state, which, in itself, was sufficient to employ a clerk during regular office hours, but which was performed by Mr. Mann, at such intervals, in any part of the day or night, as he could command, not otherwise appropriated.

To all these labors of the voice and pen—of brain and muscle—at home and abroad—must be added the "wear and tear" of spirits, as well as the physical labor of writing in defense of himself and the board, from numerous attacks which were made, from time to time, upon his and their measures and publications.

The most memorable of these attacks, as connected with the educational policy of the state, was the attempt made in the legislature of 1840, for the abolition of the Board of Education, the discontinuance of the normal schools, the payment back to Edmund Dwight of the money which he had given to aid in the advancement of these schools, and generally for setting things back to the point from which they had started three years before. A majority of the committee on education, sprang a bill upon the House for accomplishing these purposes, without the knowledge of the minority of the committee, who were favorable to the board, until a few hours before the report was submitted. No opportunity was allowed, either by the committee, or the house, for a counter report, but an attempt was made to drive the bill through, without delay and without debate. Delay was secured, a counter report was made by the minority, a debate was

had, and the wise policy of former legislatures in establishing the board, and in inaugurating the system of special institutions, and courses of training for the professional training of teachers was ably vindicated, and, contrary to all expectation, on the part of the best friends of the board, and the secretary, the measure was defeated, and so thoroughly, that no attempt was afterward made to discontinue this department of the government. The friends of public schools, and of special institutions, for the qualification and improvement of teachers, and of state supervision of the great interest of education, in every state, owe a large debt of gratitude to those men who achieved a triumph for the Board of Education, the normal schools, and Mr. Mann, in the legislature of Massachusetts, in 1840.* Defeat there and then, added to the disastrous policy in Pennsylvania, Ohio, and Connecticut, about the same time, in reference to common schools, would have changed the whole condition of public instruction in this country, for a half century, if not forever.

In the winter of 1844, the fundamental principle of the common school system of Massachusetts, its requiring of all teachers to inculcate the principles of piety, justice, universal benevolence, and other Christian virtues, and its prohibition of those things "which are calculated to favor the tenets of any particular sect"—the sole basis of common schools can be maintained among differing and discordant religious denominations—was assailed by violent attacks on the board and their secretary, on the ground that they, and particularly Mr. Mann, had, for the first time, asserted this principle, in such form and to such extent as to exclude all religious men and all distinctive religious instruction from the public schools, and their administration. To these grave charges, variously reiterated, Mr. Mann replied in "*Three Letters*," which were afterward republished in a pamphlet, entitled "*The Common School Controversy*." In these letters Mr. Mann vindicates, in a masterly manner, both the policy of the constitution and school laws of Massachusetts, in this regard, but showed, undeniably, that the charges made against the board—as to the questionable religious character of a majority of the members who had composed it, from time to time, and of the documents which the board or secretary had published, and as to the influence and results of their actions, and of their publication, so far as the same could be

*The majority and minority reports, together with letters from George B. Emerson, Samuel G. Howe, and remarks in the house of representatives, by Hon. John A. Shaw, of Bridgewater, afterward superintendent of public schools in New Orleans, will be found in the "*Common School Journal*" for August, 1840, Vol. II. pp. 225–46. Mr. Mann's own graphic account of the matter, will be found in an address, made by him, at the dedication of the new building erected for the State Normal School, at Bridgewater, in 1846, and which we shall append to this memoir.

measured and ascertained—were without the substance or semblance of truth. These letters, in their newspaper as well as their pamphlet form, attracted much attention, were widely commented upon in the religious as well as the secular press, and did much to disabuse the public mind of the prejudices which had been fostered against the board among many excellent people. The argument of these letters was again ably presented, in a more formal and elaborate manner, by Mr. Mann, in his twelfth annual report, and meets now with general, if not universal, acceptance.

But the document which had at once the widest circulation, and involved the author in the most varied, voluminous, and prolonged controversy, was his Seventh Annual Report, giving the results of his observations in the schools of Europe, in the summer of 1843. The attacks made from various quarters, as to Mr. Mann's statement of facts, or his speculations, as to modes of instructing deaf-mutes, of managing juvenile delinquents, and methods of instruction and discipline in public schools generally, and particularly in those of Prussia, with Mr. Mann's replies and explanations, did a vast amount of good, by attracting the attention of educated men, and of teachers, all over the country, to the condition of our own schools, both public and private, and to the adoption, very widely, of the methods described. The personal animosities which this controversy engendered, we trust, are allayed or forgotten; and we have no disposition to revive or perpetuate them by any further notice, except to remark that, in its progress, this controversy absorbed much time, and occasioned much wear and tear of spirits—but did not diminish the amount or variety of Mr. Mann's official labors. We are not sure but a good, sharp controversy is necessary to get the largest amount of work out of all the faculties of a mind constituted like that of Mr. Mann.

In retiring from his post, as secretary of the Board of Education, in the autumn of 1848, Mr. Mann can justly claim that his labors, during the twelve years he held the office, had more than realized all the promises of good to the common schools which their friends ever made, to induce the legislature to establish the policy of state supervision. If we turn to the "*Memorial of the Directors of the American Institute of Instruction*,"* praying for the appointment of a superintendent of common schools, drawn up by Mr. George B. Emerson, and presented to the legislature of Massachusetts, in 1836, we find that, in every way in which it was claimed an officer might act for the good of the schools, Mr. Mann did act with wonderful efficiency, and the largest results.

* We append this Memorial.

Of Mr. Mann's political career, this Journal is not the place to speak in detail. On the 23d of February, John Quincy Adams, who was the representative from the congressional district in which Mr. Mann resided, died in the United States House of Representatives, at Washington, and Mr. Mann had the great honor of being selected for two terms, by his constituents, as the most suitable person to succeed him. But great as was the urgency, and powerful as were the motives which led Mr. Mann to accept the nomination, and, on his election, to enter again the arena of political life, we, in common with many other personal and educational friends, regretted then, and regret now, his decision. It took him from a field purely beneficent, in which he was more widely known, and more highly appreciated, than any man living, and where he was every day gaining the willing attention of a larger audience, from all creeds and parties in every part of the country. By throwing himself, with his usual earnestness, and universally acknowledged ability, into the discussion of questions on which the country was already bitterly and widely divided, he cut himself off from the sympathy of a large portion of the people, even on questions which involve no party issues; and he soon became immersed in personal controversy, which exhausts the energies of the best minds, without accomplishing large and permanent results in the way of beneficent legislation. Whoever wishes to exert a powerful and permanent influence in the great field of school and educational improvement, must be able to command the attention and sympathy of large portions of all the great political parties into which the country, and every section of the country, is divided and sub-divided. Whatever hopes Mr. Mann, or his friends, entertained, as to his ability to induce the general government to aid, directly or indirectly, the establishment of an educational bureau, in connection with one of the departments at Washington, or with the Smithsonian Institution, were disappointed; and, after an experience of five years, during which time Mr. Mann was a candidate for the office of governor of Massachusetts, he returned again to the educational field, by accepting the presidency of Antioch College, at Yellow Springs, Ohio.

Antioch College was established under the auspices, and by the patronage, of a religious body, designated by themselves "Christians," because the "disciples were first called Christians in Antioch." Mr. Mann, since his residence at Yellow Springs, has united himself in ecclesiastical fellowship with this denomination, officiates for them on the Sabbath, and acts with them in the associations or conventions of their churches and congregations. In the administration and instruction of the college, Mr. Mann claims to stand on an unsectarian, al-

though christian, platform; but this claim has not shielded him, or the institution, from the assaults of other denominations—not even from the sect, whose charity in founding the college was not broad enough to tolerate such teaching in ethics and morals only, as would satisfy all professed believers in the New Testament.

The college was founded mainly on the "scholarship" principle—and as all the funds collected on this basis, and many thousand dollars more, were converted, not into a permanent fund to pay professors, and meet the annual expenses of the institution, but into buildings which yield no pecuniary income, it was soon ascertained that the larger the number of students sent up on scholarship certificates, the sooner would come the utter bankruptcy of the enterprise. Hence it has come to pass that, between the assaults of sectarian enemies—enemies from within and without the "Christian" church—and the importunate claims of creditors, Mr. Mann has been again involved in unprofitable controversy, and has been compelled to expend energies, needed to realize his large educational plans, in saving the college, as a literary institution, from the wreck of its financial policy.

In the original organization, and through Mr. Mann's entire management of Antioch College, thus far, he has aimed to secure three points, beyond the ordinary scope of American college discipline.

1. To secure for the female sex equal opportunities of education with the male, and to extend those opportunities in the same studies, and classes, and by the same instructors, after the manner of many academic institutions in different parts of the country.

2. To confer the college degrees only upon persons who have not only sustained the requisite literary and scientific character, but who, during their college course, have not been addicted to low and mean associations, nor branded with the stigma of any flagrant vice.

3. To establish, within the walls of the college, a common law, which shall abrogate and banish the now recognized "*Code of Honor*," and exhibit the true relation of students and Faculty to be that of a large family, in which each member regards the honor of others, and of the whole, as sacredly as his own, and does not withhold from the Faculty any knowledge of the transactions of students, which the best good of each student, and of the college, require to be known.

It is too early yet to speak of the success or failure of these plans, so far as they are new, and so far as they challenge comparison with older colleges. If they fail, it will not be from the want of ability, earnestness, and industry, on the part of HORACE MANN.

We should have mentioned that Mr. Mann received the degree of LL. D., from Harvard College, and from Brown University.

It is not the aim of this Journal, in its record of the activity and services of living teachers, and promoters of education, to pronounce a final judgment on the character of the subject of each memoir, or the comparative value of the services rendered. In this instance we copy from the "*American Phrenological Journal*" the following analysis of Mr. Mann's character and life, as dictated from a cast of his head, by a manipulator in the office of Messrs. Fowler, in New York. As Mr. Mann is a believer in the philosophy of Phrenology, he can not object that the record which nature has written "to be read of all men" is transcribed for the edification of our readers.

He has, naturally, great physical and mental activity, and a kind of wiryness of body without sufficient vital force to give the sustaining power necessary for long-continued physical or mental action. His body is slim and slight, yet very well proportioned in its parts. His lungs are not large, the digestive system is moderately developed, and the muscles are proportioned to the lack of vitality; hence he has not a high order of physical power, nor sufficient vitality to sustain such power did he possess it. His chief care in regard to the body should be to combine with his rigid temperance in gustatory matters, an equal amount of temperance in regard to labor, exposure of body, and labor of mind. He has, doubtless, already learned by experience, that physical activity and labor, within due bounds, are essential to clearness and strength of mind, as well as to health of body. He can not, at his age, by muscular labor in the open air, give hardness and great power to his physical system, yet he can in this way accumulate an apparent surplus of physical energy for a given mental effort that may tax the system to an unusual degree.

His brain is large for his body, and although the head in circumference is only of full size, the hight of it is unusually great. The head may be denominated a "three-story one," which gives elevation to his character, and an aspiring disposition. His power is moral and intellectual, rather than physical. We seldom find so large a brain in the tophead, in the region of the organs of reason, imagination, sympathy, dignity, perseverance, wit, and moral sentiment, joined with so little basilar brain in the region of the animal and selfish organs.

There are several peculiarities of development which deserve notice. The higher portion of the organ of combativeness is much larger than the lower; the latter being small, giving a disinclination for physical combat and a lack of animal courage, while the former being rather large, gives a tendency to intellectual conflict and moral courage. His destructiveness never leads to the infliction of unnecessary physical pain,—he dreads it, even upon an oyster, yet the anterior and upper part of the organ appears to be sharp and fully developed, which gives efficiency and severity of an intellectual and moral cast, as in criticism and reviews of opinions, character, and conduct, and imparts general thoroughness of disposition.

Secretiveness is insufficient to produce more than ordinary policy and cunning, but the anterior part of the organ, which works with intellect and the elements of taste, imparts an elevated and intellectual policy, which acts in the adjustment of thoughts in such a way that they sting error without offending delicacy. His cautiousness is large in the anterior part, which leads to watchfulness, and that care and painstaking which plans for prospective dangers and emergencies, and guards against accidents, while the posterior part of the organ is not large enough to produce timidity; hence he frequently appears more courageous and brave than the development of the organs of combativeness and destructiveness could inspire him to be. Having planned a course of action, he proceeds among dangers with a full consciousness of their position and character, and, to an observer, seems reckless of them; as a pilot, who knows well where the rocks and bars lie about the channel, steers among them under full sail, to the terror of those who know there are rocks, but are not certain that the pilot knows their locality.

His constructiveness is largely developed, especially in its upper portion, giving

planning talent and engineering ability, and greatly aids him in the construction of a subject and arrangement of thoughts, so as to produce the desired effect with the least friction. The lower, or tool-using part of the organ, is sufficiently developed to give fair practical mechanical talent, but his power in respect to mechanism is less as an executor than as a designer. Were he to devote himself to mechanism, his tendency would be upward toward the artistic, as in fine cutlery, mathematical instruments, and the like.

Ideality is large, which gives not only good taste in respect to the beauties of nature and art, but acts with the moral sentiments and intellect to give polish, refinement, and elevation to thought, sentiment, and expression. Whatever is rude, unbalanced, and imperfect, displeases him; hence he seeks to refine and polish whatever he says and does.

His sublimity is large, and, in conjunction with veneration and firmness, gives a passion for mountain scenery, and whatever is grand in the machinery of the universe; hence he would pursue astronomy with passionate fondness as a field for the range of sentiment, as well as for mathematical study.

If he has any one moral sentiment that overmasters all the rest, and in any sense warps his judgment, it is benevolence, and he will more frequently be called radical and infatuated when following its instincts than from any other cause. It stimulates his conscientiousness, fortifies his pride and ambition, strengthens perseverance, arouses energy, invokes logic, and awakens wit to do its bidding and minister to its ends, and it may therefore be called the "team" of his mind, the central mental element of his nature.

He has a remarkable development of firmness. That organ is both very large and sharp, indicating that it has been unusually stimulated to activity by circumstances, as if his course of life had been a pioneering one,—breaking new ground, enforcing new modes of thought, and running counter to opposition, and the opinions and customs of ages.

In respect to self-esteem, he has more of that portion of it that gives dignity and manliness than of that which imparts a dictatorial, domineering spirit. In early life he was inclined to defer to others, to shrink from responsibility, to feel that others could do more and better than he; at the same time he had no lack of personal self-respect. That part of self-esteem that produces the dictating spirit, and the disposition to take responsibility, has been developed along with firmness, and doubtless from the same cause and course of life.

His conscientiousness is very large, and particularly so in the outer part of it, joining cautiousness, which gives him moral circumspection, carefulness to *do* right, as well as to entertain just principles; hence he feels its binding force just as much in the details of life, in the practical duties of the day, as in respect to fundamental moral principles; hence the law of expediency, as such, when brought in conflict with the law of right, becomes nugatory.

His hope stretches forward prophetically,—he works for the future. He hopes for little in the present, except that which he, by dint of care and effort, can bring to pass; and he is less inclined to trust his business or interests in other hands than most men. He feels that he must be in his affairs personally, and have an eye over and a hand in the matter, or it will in some way go wrong. His hope inspires to effort, but not to expect success from luck, chance, or fortune, without labor and vigilance. He is not a man to lie quietly on the sunny side of present prosperity, expecting that "to-morrow shall be as this day, and much more abundant," but to plow and sow, in the storm if need be; yet he looks confidently for the harvest, however remote it may be. This is as true of him in morals as in business.

He has not a high degree of credulity. That part of the organ of marvelousness or spirituality which most influences his character, is the inner or higher part of it, which gives spiritual or religious faith, reliance upon truth and first principles; and, although he is radical and progressive, he is by no means credulous. His mind is very critical, and rather skeptical, so much so that he takes little upon trust, and feels impelled to a thorough, rigid examination of whatever may be presented for his adoption; nor is his large causality satisfied with any thing short of this, for it leads him to seek "a base line" for every thing in business, in propositions, or in morals, as well as in mathematics.

Imitation and agreeableness are large, which give him the power of mental

assimulation and harmony. He can reconcile apparently discordant things, or meet those who think differently from himself, without making manifest, in a high degree, the real difference that may exist between them, and he will so far conform to an opponent as not to seem in opposition, until, by asking questions and quoting particulars, he can show good reasons for a counter belief thus, and lead his adversary into his own mode of thought.

He has the organ called human nature large, which leads him instinctively to the study of mind, whether appertaining to men, to childhood, or to animals He sees at a glance the general drift of a man's intellect and character; is strongly impressed with the truth of those inferences, and acts upon them, and generally with safety. If he takes a dislike to, or forms a favorable opinion of, a stranger at first sight, subsequent acquaintance generally corroborates the judgment thus formed; hence, as a teacher, as a lawyer, or as a trader, he would, as it were, recognize a man's mental sphere, and know what to say to impress a sentiment or exert a given influence upon his mind. This faculty, joined with agreeableness or suavitiveness, enables him to make palatable, and accepted without hesitation, truths which, uttered harshly and in disregard of the tone of mind of the one addressed, would be at once rejected.

Intellectually, he has some peculiarities. His reasoning organs are greatly superior to his perceptives and memory. He has a remarkably critical and logical cast of mind. He has the power to sift, dissect, and essay propositions and principles with great celerity and exactitude, while his large causality enables him to see the propriety and logical congruity of facts and propositions, and to present those views to others in a clear, concise, and forcible manner. In juxtaposition with causality he has very large mirthfulness, which gives him equal facility to recognize and show up whatever is incongruous, ridiculous, or witty, in such contrast with truth and propriety as not only to amuse the mind of the hearer, but to brand error and immortalize truth.

His faculties of memory and perception are doubtless active, appertaining as they do to such an active temperament, and because his sentiments and his reasoning intellect urge them to effort, to furnish data on which the higher mental forces may act. He finds it necessary to trust to memoranda for facts and statistics, but when thus obtained, he knows well how to work them up into arguments. His mind has much more to do with principles and elements than with facts, hence he is much more a philosopher than a historian.

His language, instead of being copious, has this peculiar quality, viz., precision, nice distinction, and ready appreciation of synonyms; and, in speaking or writing, his faculty of tune, in connection with language and ideality, leads him to seek euphony of expression, and a smooth, mellifluent style; and in this combination, with mirthfulness, ideality, and agreeableness added, consists his power of expressing stern, cutting truth, in a poetical and pleasing manner.

It requires more effort for him than for most men to individualize his ideas, and to concentrate his powers on a given mental effort. He wants time and quiet, and a convenient opportunity. He can never bring out his full power of thought on a subject instantaneously. He must survey the whole ground, and converge his mind upon it logically; hence, in off-hand, extemporaneous speaking, he rarely does himself or his subject full justice.

In moral and social dispositions he is strongly developed, and bears the marks of special resemblance to his mother. He has large adhesiveness, which makes him eminently friendly. The upper part of philoprogenitiveness is large, which leads him to regard the moral and intellectual good of children much more than to look upon them as mere pets and playthings; and he rarely plays with children without holding virtue, intelligence, and morality up to them as the goal of their hopes and efforts; hence he seldom flatters them, or ministers to their animal gratification. His love for female society is strong, yet delicate, and he is much more interested in woman as relates to her refinement, and elevation, and purity of character, than passionally.

The home, the family, and its elevated endearments, is the scene of his highest hopes and fondest attachments.

REMARKS

AT THE DEDICATION OF THE STATE NORMAL SCHOOL-HOUSE AT BRIDGEWATER.

August 19, 1846.

THE completion of a new edifice to accommodate the State Normal School at Bridgewater was signalized by appropriate exercises, on the 19th of August, 1846. Addresses were made during the day by His Excellency, Governor Briggs, Hon. William G. Bates, of Westfield, Amasa Walker, Esq., of Brookfield, at the church, and in the new school-room. After these addresses the company partook of a collation in the Town Hall, on which occasion the health of the Secretary of the Board of Education was given by the president of the day, and received by the company with enthusiastic applause. To this sentiment Mr. Mann responded as follows, as reported in the Boston Mercantile Journal.

Mr. President: Among all the lights and shadows that have ever crossed my path, this day's radiance is the brightest. Two years ago, I would have been willing to compromise for ten years' work, as hard as any I had ever performed, to have been insured that, at the end of that period, I should see what our eyes this day behold. We now witness the completion of a new and beautiful Normal School-house for the State Normal School at Bridgewater. One fortnight from to-morrow, another house, as beautiful as this, is to be dedicated at Westfield, for the State Normal School at that place. West Newton was already provided for by private munificence. Each Normal School then will occupy a house, neat, commodious, and well adapted to its wants; and the Principals of the schools will be relieved from the annoyance of keeping a Normal School in an *ab*-Normal house.

I shall not even advert to the painful causes which have hastened this most desirable consummation,—since what was meant for evil has resulted in so much good. Let me, however, say to you, as the moral of this result, that it strengthens in my own mind what I have always felt; and I hope it will strengthen, or create, in all *your* minds, a repugnance to that sickly and cowardly sentiment of the poet, which made him long

> "For a lodge in some vast wilderness,
> Some boundless contiguity of shade,
> Where rumor of oppression and deceit,
> Of unsuccessful or successful wars,
> Might never reach him more."

There is oppression in the world which almost crushes the life out of humanity. There is deceit, which not only ensnares the unwary, but almost abolishes the security, and confidence, and delight, which rational and social beings ought to enjoy in their intercourse with each other. There are wars, and the question whether they are right or wrong tortures the good man a thousand times more than any successes or defeats of either belligerent. But the feeling which springs up spontaneously in my mind, and which I hope springs up spontaneously in your minds, my friends, in view of the errors, and calamities, and iniquities of the race, is, *not* to flee from the world, but to remain in it; *not* to hie away to forest solitudes or hermit cells, but to confront selfishness, and wickedness, and ignorance, at whatever personal peril, and to subdue and extirpate them, or to die in the attempt. Had it not been for a feeling like this among your friends, and the friends of the sacred cause of education in which you have enlisted, you well know that the Normal Schools of Massachusetts would have been put down, and that this day never would have shone to gladden our hearts and to reward our

toils and sacrifices. Let no man who knows not what has been suffered, what has been borne and forborne, to bring to pass the present event, accuse me of an extravagance of joy.

Mr. President, I consider this event as marking an era in the progress of education,—which, as we all know, is the progress of civilization,—on this western continent and throughout the world. It is the completion of the first Normal School-house ever erected in Massachusetts,—in the Union,—in this hemisphere. It belongs to that class of events which may happen once, but are incapable of being repeated.

I believe Normal Schools to be a new instrumentality in the advancement of the race. I believe that, without them, Free Schools themselves would be shorn of their strength and their healing power, and would at length become mere charity schools, and thus die out in fact and in form. Neither the art of printing, nor the trial by jury, nor a free press, nor free suffrage, can long exist, to any beneficial and salutary purpose, without schools for the training of teachers; for, if the character and qualifications of teachers be allowed to degenerate, the Free Schools will become pauper schools, and the pauper schools will produce pauper souls, and the free press will become a false and licentious press, and ignorant voters will become venal voters, and through the medium and guise of republican forms, an oligarchy of profligate and flagitious men will govern the land; nay, the universal diffusion and ultimate triumph of all-glorious Christianity itself must await the time when knowledge shall be diffused among men through the instrumentality of good schools. Coiled up in this institution, as in a spring, there is a vigor whose uncoiling may wheel the spheres.

But this occasion brings to mind the past history of these schools, not less than it awakens our hopes and convinces our judgment respecting their future success.

I hold, sir, in my hand, a paper, which contains the origin, the source, the *punctum saliens*, of the Normal Schools of Massachusetts. [Here Mr. Mann read a note from the Hon. Edmund Dwight, dated March 10th, 1838, authorizing him. Mr. Mann, to say to the Legislature, that the sum of ten thousand dollars would be given by an individual for the preparation of teachers of Common Schools, provided the Legislature would give an equal sum. The reading was received with great applause.]

It will be observed, resumed Mr. Mann, that this note refers to a conversation held on the evening previous to its date. The time, the spot, the words of that conversation can never be erased from my soul. This day, triumphant over the past, auspicious for the future, then rose to my sight. By the auroral light of hope, I saw company after company go forth from the bosom of these institutions, like angel ministers, to spread abroad, over waste spiritual realms, the power of knowledge and the delights of virtue. Thank God, the enemies who have since risen up to oppose and malign us, did not cast their hideous shadows across that beautiful scene.

The proposition made to the Legislature was accepted, almost without opposition, in both branches; and on the third day of July, 1839, the first Normal School, consisting of only *three* pupils, was opened at Lexington, under the care of a gentleman who now sits before me,—Mr. Cyrus Pierce, of Nantucket,—then of island, but now of continental fame.

[This called forth great cheering, and Mr. Mann said he should sit down to give Mr. Pierce an opportunity to respond. Mr. Pierce arose under great embarrassment; starting at the sound of his name, and half doubting whether the eloquent Secretary had not intended to name some other person. He soon recovered, however, and in a very happy manner extricated himself from the "fix" in which the Secretary had placed him. He spoke of his children, the pupils of the first Normal School, and of the honorable competition which ought to exist between the several schools; and to the surprise, as well as regret, of all who heard him, he spoke of being admonished by infirmities which he could not mistake, that it was time for him to retire from the profession. The audience felt as if, for once in his life, this excellent teacher had threatened to do wrong. He then told an amusing anecdote of a professor who retained his office too long, and was toasted by the students in the words of Dr. Watts,—"The Rev. Dr. ——, Hush, my babe, lie still and slumber." And then he sat down amidst the sincere plaudits of the company, who seemed to think he was not "so plaguy old" as he wished to appear.]

I say, said Mr. Mann, on resuming, that, though the average number of Mr. Pierce's school is now from sixty to eighty; and though this school, at the present term, consists of one hundred pupils, yet the first term of the first school opened with *three* pupils only. The truth is, though it may seem a paradox to

say so, the Norman Schools had to come to prepare a way for themselves, and to show, by practical demonstration, what they were able to accomplish. Like Christianity itself, had they waited till the world at large called for them, or was ready to receive them, they would never have come.

In September, 1839, two other Normal Schools were established: one at Barre, in the county of Worcester, since removed to Westfield, in the county of Hampden; and the other at this place, whose only removal has been a constant moving onward and upward, to higher and higher degrees of prosperity and usefulness.

In tracing down the history of these schools to the present time, I prefer to bring into view, rather the agencies that have helped, than the obstacles which have opposed them.

I say, then, that I believe Massachusetts to have been the only State in the Union where Normal Schools could have been established; or where, if established, they would have been allowed to continue. At the time they were established, five or six thousand teachers were annually engaged in our Common Schools; and probably nearly as many more were looking forward to the same occupation. These incumbents and expectants, together with their families and circles of relatives and acquaintances, would probably have constituted the greater portion of active influence on school affairs in the State; and had they, as a body, yielded to the invidious appeals that were made to them by a few agents and emissaries of evil, they might have extinguished the Normal Schools, as a whirlwind puts out a taper. I honor the great body of Common School teachers in Massachusetts for the magnanimity they have displayed on this subject. I know that many of them have said, almost in so many words, and, what is nobler, they have acted as they have said:—"We are conscious of our deficiencies; we are grateful for any means that will supply them,—nay, we are ready to retire from our places when better teachers can be found to fill them. We derive, it is true, our daily bread from school-keeping, but it is better that our bodies should be pinched with hunger than that the souls of children should starve for want of mental nourishment; and we should be unworthy of the husks which the swine do eat, if we could prefer our own emolument or comfort to the intellectual and moral culture of the rising generation. We give you our hand and our heart for the glorious work of improving the schools of Massachusetts, while we scorn the baseness of the men who would appeal to our love of gain, or of ease, to seduce us from the path of duty." This statement does no more than justice to the noble conduct of the great body of teachers in Massachusetts. To be sure, there always have been some who have opposed the Normal Schools, and who will, probably, continue to oppose them as long as they live, lest they themselves should be superseded by a class of competent teachers. These are they who would arrest education where it is; because they cannot keep up with it, or overtake it in its onward progress. But the wheels of education are rolling on, and they who will not go with them must go under them.

The Normal Schools were supposed by some to stand in an antagonistic relation to academies and select schools; and some teachers of academies and select schools have opposed them. They declare that they can make as good teachers as Normal Schools can. But, sir, academies and select schools have existed in this State, in great numbers, for more than half a century. A generation of school-teachers does not last, at the extent, more than three or four years; so that a dozen generations of teachers have passed through our Public Schools within the last fifty years. Now, if the academies and high schools can supply an adequate number of school-teachers, why have they not done it? We have waited half a century for them. Let them not complain of us, because we are unwilling to wait half a century more. Academies are good in their place; colleges are good in their place. Both have done invaluable service to the cause of education. The standard of intelligence is vastly higher now than it would have been without their aid; but they have not provided a sufficiency of competent teachers; and if they perform their appropriate duties hereafter, as they have done heretofore, they cannot supply them; and I cannot forbear, Mr. President, to express my firm conviction, that if the work is to be left in their hands, we never can have a supply of competent teachers for our Common Schools, without a perpetual Pentecost of miraculous endowments.

But if any teacher of an academy had a right to be jealous of the Normal Schools, it was a gentleman now before me, who, at the time when the Bridgewater Normal School came into his town, and planted itself by the path which led to his door, and offered to teach gratuitously such of the young men and women attending his school, as had proposed to become teachers of Common Schools, instead of opposing it, acted with a high and magnanimous regard to the great interests of humanity. So far from opposing, he gave his voice, his vote, and his purse, for the establishment of the school, whose benefits, you, my young friends, have since enjoyed. (Great applause.) Don't applaud yet, said Mr. Mann, for I have better things to tell of him than this. In the winter session of the Legislature of 1840, it is well known that a powerful attack was made, in the House of Representatives, upon the Board of Education, the Normal Schools, and all the improvements which had then been commenced, and which have since produced such beneficent and abundant fruits. It was proposed to abolish the Board of Education, and to go back to the condition of things in 1837. It was proposed to abolish the Normal Schools, and to throw back with indignity, into the hands of Mr. Dwight, the money he had given for their support.

That attack combined all the elements of opposition which selfishness and intolerance had created,—whether latent or patent. It availed itself of the argument of expense. It appealed invidiously to the pride of teachers. It menaced Prussian despotism as the natural consequence of imitating Prussia in preparing teachers for schools. It fomented political partisanship. It invoked religious bigotry. It united them all into one phalanx, animated by various motives, but intent upon a single object. The gentleman to whom I have referred was then a member of the House of Representatives, and Chairman of the Committee on Education, and he, in company with Mr. Thomas A. Greene, of New Bedford, made a minority report, and during the debate which followed, he defended the Board of Education so ably, and vindicated the necessity of Normal Schools and other improvements so convincingly, that their adversaries were foiled, and these institutions were saved. The gentleman to whom I refer is the Hon. JOHN A. SHAW, now Superintendent of schools in New Orleans.

[Prolonged cheers;—and the pause made by Mr. Mann, afforded an opportunity to Mr. Shaw, in his modest and unpretending manner, to disclaim the active and efficient agency which he had had in rescuing the Normal Schools from destruction before they had had an opportunity to commend themselves to the public by their works;—but all this only increased the animation of the company, who appeared never before to have had a chance to pay off any portion of their debt of gratitude. After silence was restored, Mr. Shaw said that every passing year enforced upon him the lesson of the importance and value of experience in school-keeping. Long as he had taught, he felt himself improved by the teachings of observation and practice; and he must therefore express his joy and gratitude at the establishment and the prosperity of the school at that place, whatever might be the personal consequences to himself.]

Nor, continued Mr. Mann, is this the only instance of noble and generous conduct which we are bound this day to acknowledge. I see before me a gentleman who, though occupying a station in the educational world far above any of the calamities or the vicissitudes that can befall the Common Schools,—though, pecuniarily considered, it is a matter of entire indifference to him whether the Common Schools flourish or decline,—yet, from the beginning, and especially in the crisis to which I have just adverted, came to our rescue, and gave all his influence, as a citizen and as a teacher, to the promotion of our cause; and whom those who may resort hither, from year to year, so long as this building shall stand, will have occasion to remember, not only with warm emotions of the heart, but, during the wintry season of the year, with warm sensations of the body also.* I refer to Mr. GEO. B. EMERSON.

[Mr. Emerson was now warmly cheered, until he rose, and in a heartfelt address of a few moments, expressed his interest in the school, and in the cause of education, which he begged the young teachers not to consider as limited to this imperfect stage of our being.]

These, said Mr. Mann, are some of the incidents of our early history. The late events which have resulted in the generous donations of individuals, and in the patronage of the Legislature, for the erection of this, and another edifice at Westfield, as a residence and a home for the Normal Schools,—these events, I shall

* Mr. Emerson has furnished, at his own expense, the furnace by which the new school-house is to be warmed.

consult my own feelings, and perhaps I may add, the dignity and forbearance which belong to a day of triumph, in passing by without remark.

[This part of the history, however, was not allowed to be lost. As soon as the Secretary had taken his seat, the Rev. Mr. Waterston, who had been instrumental in getting up the subscription to erect the two school-houses, arose, and eloquently completed the history. He stated, in brief, that the idea of providing suitable buildings for the Normal Schools originated with some thirty or forty friends of popular education, who, without distinction of sect or party, had met, in Boston, in the winter of 1844-5, to express their sympathy with Mr. Mann in the vexatious conflict which he had so successfully maintained; and who desired, in some suitable way, to express their approbation of his course in the conduct of the great and difficult work of reforming our Common Schools. At this meeting, it was at first proposed to bestow upon Mr. Mann some token evincive of the personal and public regard of its members; but, at a subsequent meeting, it was suggested that it would be far more grateful and acceptable to him to furnish some substantial and efficient aid in carrying forward the great work in which he had engaged, and in removing those obstacles and hinderances both to his own success and to the progress of the cause, which nothing but an expenditure of money could effect. No way seemed so well adapted to this purpose as the placing of the Normal Schools upon a firm and lasting basis, by furnishing them with suitable and permanent buildings; and the persons present thereupon pledged themselves to furnish $5000, and to ask the Legislature to furnish a like sum for this important purpose. The grant was cheerfully made by the Legislature, whose good-will has since been further expressed by a liberal grant, to meet the expenses of those temporary Normal Schools, called Teachers' Institutes. Mr. Mann, who had not yet taken his seat, then continued as follows:]

I have, my young friends, former and present pupils of the school, but a single word more to say to you on this occasion. It is a word of caution and admonition. You have enjoyed, or are enjoying, advantages superior to most of those engaged in our Common Schools. Never pride yourselves upon these advantages. Think of them often, but always as motives to greater diligence and exertion, not as points of superiority. As you go forth, after having enjoyed the bounty of the State, you will probably be subjected to a rigid examination. Submit to it without complaint. More will sometimes be demanded of you than is reasonable. Bear it meekly, and exhaust your time and strength in performing your duties, rather than in vindicating your rights. Be silent, even when you are misrepresented. Turn aside when opposed, rather than confront opposition with resistance. Bear and forbear, not defending yourselves, so much as trusting to your works to defend you. Yet, in counseling you thus, I would not be understood to be a total non-resistant,—a perfectly passive, non-elastic sand-bag, in society; but I would not have you resist until the blow be aimed, not so much at you, as, through you, at the sacred cause of human improvement, in which you are engaged,—a point at which forbearance would be allied to crime.

To the young ladies who are here—teachers and those who are preparing themselves to become teachers,—I would say, that, if there be any human being whom I ever envied, it is they. As I have seen them go, day after day, and month after month, with inexhaustible cheerfulness and gentleness, to their obscure, unobserved, and I might almost say, unrequited labors, I have thought that I would rather fill their place, than be one in the proudest triumphal procession that ever received the acclamations of a city, though I myself were the crowned victor of the ceremonies. May heaven forgive them for the only sin which, as I hope, they ever commit,—that of tempting me to break the commandment, by coveting the blissfulness and purity of their quiet and secluded virtues.

LIST OF PUBLICATIONS BY HORACE MANN, LL. D.

THE COMMON SCHOOL JOURNAL. 1839—1848. 10 vols., royal octavo.

ABSTRACT OF MASSACHUSETTS SCHOOL RETURNS. 1839—1847.

ANNUAL REPORTS (TWELVE,) AS SECRETARY OF THE BOARD OF EDUCATION, from 1838 to 1849.

SUPPLEMENTARY REPORT ON SCHOOL-HOUSES. 1838.

MASSACHUSETTS SYSTEM OF COMMON SCHOOLS; being an enlarged and revised edition of the Tenth Annual Report. 1849. pp. 212.

LECTURES ON EDUCATION. 1845. pp. 338.

AN ORATION, DELIVERED BEFORE THE AUTHORITIES OF THE CITY OF BOSTON. July 4, 1842. pp. 86.

A FEW THOUGHTS FOR A YOUNG MAN; a Lecture, delivered before the Boston Mercantile Library Association, on its Twenty-ninth Anniversary. 1850. pp. 84.

A FEW THOUGHTS ON THE POWERS OF WOMEN. Two Lectures. 1853. pp. 141.

DEDICATION OF ANTIOCH COLLEGE, AND INAUGURAL ADDRESS OF ITS PRESIDENT. 1854. pp. 144.

BACCALAUREATE, DELIVERED AT ANTIOCH COLLEGE. 1857. pp. 61.

DEMANDS OF THE AGE ON COLLEGES. Speech delivered before the Christian Convention, Ohio. October 5, 1854. pp. 86.

We give below the titles of the pamphlets which we have had bound together and lettered "*Mann's Educational Controversies.*"

THE COMMON SCHOOL CONTROVERSY; consisting of three Letters of the Secretary of the Board of Education, in reply to charges preferred against the Board, with extracts from the daily press, in regard to the controversy. 56 pages.

SEVENTH ANNUAL REPORT OF THE SECRETARY OF THE BOARD OF EDUCATION. (By Horace Mann.) January 1, 1844. pp. 188.

Remarks on the Seventh Annual Report of the Hon. Horace Mann, Secretary of the Massachusetts Board of Education. By Thirty-one Boston Teachers. 1844. pp. 144.

Reply to the "Remarks" of Thirty-one Boston Schoolmasters, on the Seventh Annual Report of the Secretary of the Massachusetts Board of Education. By Horace Mann. 1844. pp. 176.

Rejoinder to the "Reply" of the Hon. Horace Mann, Secretary of the Massachusetts Board of Education to the "Remarks" of the Association of Boston Masters, upon his Seventh Annual Report. 1845. By the "Thirty-one Schoolmasters." pp. 55.

Rejoinder to the Second Section of the "Reply." By Wm. A. Shepard. March, 1845. pp. 56.

Rejoinder to the Third Section of the "Reply." By S. S. Greene. March, 1845. pp. 40.

Rejoinder to the Fourth Section of the "Reply." By Joseph Hale. April, 1845. pp. 64.

Answer to the "Rejoinder" of "Twenty-nine" Boston Schoolmasters, part of the "Thirty-one" who published "Remarks" on the Seventh Annual Report of the Secretary of the Massachusetts Board of Education. By Horace Mann. 1845. pp. 124.

Penitential Tears; or a Cry from the Dust. By "the Thirty-one," prostrated and pulverized by the Hand of Horace Mann, Secretary of the Massachusetts Board of Education. 1845. pp. 59.

"Penitential Tears!" By Massachusetts.

Observations on a pamphlet, entitled "Remarks on the Seventh Annual Report of the Hon. Horace Mann, Secretary of the Massachusetts Board of Education." By G. B. Emerson. pp. 16.

Mr. Bumstead's Defense of his School-books, in reply to Mr. S. S. Greene. July, 1845. pp. 8.

Report of the Special Committee of the Primary School Board, on a portion of the Remarks of the Grammar Masters. Boston: 1844. pp. 13.

Report of a Committee of the Association of Masters of the Boston Public Schools, on a letter from Dr. John Odin, in relation to a Report of the Special Committee of the Primary School Board. Boston: 1845. pp. 18.

School Discipline. By Anti-Busby.

The Schoolmasters' Review of Mr. Mann's Report. By Luther.

REPORTS OF THE ANNUAL VISITING COMMITTEES, OF THE PUBLIC SCHOOLS OF THE CITY OF BOSTON. 1845. pp. 168.

Review of the Reports of the Annual Visiting Committees, of the Public Schools of the City of Boston, 1845. By Scholiast. pp. 58.

The Scholiast Schooled. An Examination of the Review of the Reports of the Annual Visiting Committees of the Public Schools of the City of Boston, for 1845, by Scholiast. By A Bostonian. 1846. pp. 65.

Address to the Citizens of Boston. By S. G. Howe, William Brigham, J. L. T Coolidge, and Theophilus Parsons. March, 1846. pp. 12.

THE BIBLE, THE ROD, AND RELIGION, IN COMMON SCHOOLS. The Ark of God on a new cart: A Sermon, by the Rev. Matthew Hale Smith. A Review of the Sermon, by Wm. B. Fowle, publisher of the Massachusetts Common School Journal. Strictures on the Sectarian Character of the Common School Journal, by a Member of the Massachusetts Board of Education. Correspondence between the Hon. Horace Mann, Secretary of the Board of Education, and Rev. Matthew Hale Smith. Boston: 1847. pp. 59.

Sequel to the so-called Correspondence between the Rev. Matthew Hale Smith and Horace Mann, surreptitiously published by Mr. Smith; containing a letter from Mr. Mann, suppressed by Mr. Smith, with the reply therein promised. Boston: 1847. pp. 56.

Reply to the Sequel of Hon. Horace Mann; being a supplement to the Bible, the Rod, and Religion, in Common Schools. By Matthew Hale Smith. Second edition. Boston: 1847. pp. 36.

Letter to the Rev. Matthew Hale Smith, in an answer to his "Reply" or "Supplement." By Horace Mann. Boston: 1847. pp. 22.

Horace Mann and Matthew Hale Smith. April 30, 1847. pp. 8.

MEMORIAL

OF THE

DIRECTORS OF THE AMERICAN INSTITUTE OF INSTRUCTION.

To the Honorable the Legislature
of the Commonwealth of Massachusetts.

The directors of the American Institute of Instruction beg leave to present their memorial, praying them to consider the expediency of appointing, for a term of years, a superintendent of the common schools of the Commonwealth.

And, in presenting this memorial, the directors of the Institute beg leave to state some of the circumstances and reasons which have led them to feel the importance and necessity of such an officer, and which have determined them to offer to the legislature the request which they now lay before them.

Of their impression of the immeasurable value of the free schools of the Commonwealth, as an instrument of good to its citizens, your memorialists hold it unnecessary to speak at large. They confidently believe that upon the importance of an institution which, in its action, comes home to the mind and heart of every child of the Commonwealth, which does, or may do, more than any other to bring out his powers, to furnish him with good knowledge, to form his character, to give him noble aims, and to fit him in all ways for his duties as a citizen and a man, and for his whole future existence, any statements they could make would alike fall far short of the truth, and of the convictions of the wise and patriotic citizens who represent the people of the state. They believe that in no way can so much be done to benefit the whole population of the Commonwealth, as by improving the condition of the common schools. They believe, and have long believed, that in many respects these schools need improvement.

One of the objects had in view in the formation of the American Institute of Instruction, was to reach these schools, through their teachers. If these could be brought together, even once in a year, or once in a few years, it was confidently hoped that they could not fail of receiving an useful impulse. And your memorialists trust that some good has in this way been done. Their hopes have not been entirely disappointed, their exertions have not been altogether unavailing.

A few, out of the great number of teachers in the Commonwealth, have annually met together, and stimulated and encouraged each other, and made report, and borne testimony of a gradual and partial improvement.

They have annually reported much, however, of a different complexion. They have reported, with melancholy unanimity, and we fear that every member of the legislature, acquainted with any considerable portion of the schools, must confirm the truth of their report, that very many of the common schools, in all parts of the Commonwealth, have yet felt no impulse, have made no advancement, have undergone no change. The very schools which most need, and which should most feel, the fostering care of benevolent attention, those in every county, situated in the remote, and poor, and thinly-peopled districts, remain unimproved, and apparently unregarded.

We believe that the buds of genius are scattered as bountifully in these remote districts as elsewhere; that on the rough hills, and among the sterile fields, the noblest of plants, the human soul, springs with as divine capacities, and, if kindly and skillfully nurtured, will expand with as large and vigorous a growth, as in any of the most favored region; nay more, that the very absence of the softnesses and luxuries of life, will give an inward vigor and sturdiness, most favorable to the highest talents and the best virtues. But a kindly nurture they require. Good schools they must have. How shall these schools be reached?

The Institute can not reach them, it can not visit them. We have not sufficiently exact information in regard to their condition, to enable us to communicate with them, in such manner as to be sure to benefit them. Their teachers can not visit us. They do not meet with our Institute, or with any institute or association, nor are they subject to any influence which shall awaken them to greater zeal, or give them better knowledge in regard to education.

They are so numerous and remote, that the whole time of one individual would be no more than sufficient to obtain a knowledge of their state and wants; and, without this knowledge, nothing can be wisely suggested, or satisfactorily done to improve them.

What we see ought to be done, what we want the knowledge and ability to do, we come to pray the legislature to cause to be done.

We can not for a moment doubt that the legislature is entirely disposed to do whatever can be done for the common schools. We dare not impute to them the inconsistency of making a liberal provision for the development of the material resources of the state, in its mineral and vegetable treasures, and yet remaining indifferent to the infinitely greater treasures, the whole intellectual and moral resources of its future population; we are not willing to believe that the state will do more to bring to light the marble and granite of its hills, than the genius of its children.

There is a very general conviction that something more should be done for the common schools; and we believe that a chief reason why so little has hitherto been done is, that the information essential to a wise action upon the subject has not been collected and presented in a strong light to the legislature and the public.

We believe that an individual, competent to this work, and faithfully devoted to it, under the direction of the executive, or any other authority the legislature might see fit, in its wisdom, to appoint, would be able to collect information in regard to the schools, and lay it, in an annual report, before the legislature, which would enable them to act with complete knowledge of the whole subject.

We, therefore, think that the condition of the schools demands the appointment of the superintendent.

And we beg leave further to state, particularly, some of the ways in which such an officer, if appointed, could act directly for the good of the schools.

1. He could devise means for the improvement of the teachers. We hold it an evident and important truth, that no school can be essentially improved, but by the improvement of its teacher. All other things are, in comparison, of very little consequence. Children of the best parents, in the best constructed school-house, under the most favorable circumstances, will lose, and more than lose, their time, if given over to the management of an incompetent teacher. This improvement is, therefore, at the bottom of every other. Now there are various ways in which a superintendent could minister to this. By calling conventions of teachers in the different counties, he would awaken an interest which could not fail of doing good.

There are, we trust, no sections of the state, in which there are not to be found excellent schools, managed by skillful and abundantly capable teachers. But they are now isolated. They act little on each other, and still less on the numerous schools about them. The improvements that are made by individuals, in arrangement, in discipline, in the choice of things to be taught, and in the modes of teaching, are not indeed lost, for they act on the immortal minds within the influence of him who makes them. But they are usually confined to his immediate sphere; they go not abroad, to stimulate and enlighten his fellow-workers in the same cause; they are not recorded for the benefit of his successors; they cease with their author. If what is best in each, could be added to the common stock of all, all would become respectable; and such a communication, long continued, would at length render all, who were capable of it, excellent. But such a system can only be begun, and successfully continued, by the influence of some common friend.

A superintendent, visiting all the schools, would find many instructors, of good capacities, failing for want of experience, and the knowledge of various methods. To such, how often would a few suggestions be of the greatest advantage.

2. He could devise means for the formation of better teachers. It is well known that a large portion of the schools are taught by persons who have recourse to instruction for a temporary employment, in the intervals of other pursuits, or while in preparation for another calling, without especial taste or suitableness for the vocation. In some degree, it will probably be always so; it is to be hoped, in a far less degree hereafter than at present. If the schools

of the Commonwealth are ever to be what they might be, it can only happen by the separation to the work of instruction of men of peculiar gifts, to be trained and prepared for it by a special course, as men are now prepared for all other professions and all other arts. On this subject, which we shall not trust ourselves to enlarge upon, the suggestions of one intimately acquainted with all the circumstances of the schools of the Commonwealth, would have peculiar value.

3. He could furnish useful information upon the position, construction, and furniture of school-houses. This is a matter commonly referred to committees, who, however competent in other respects, have usually had little experience as to buildings of this sort, and few opportunities of seeing improved modes of structure, and who would gladly obtain hints, to assist them in the proper discharge of their commission. How valuable to such a committee would be the advice and the portfolio of a man who had seen all the best school-houses, and had prepared plans of them, and was familiar with the inconveniences and advantages of the various models.

4. He could recommend ways and means by which the schools may be encouraged. Their prosperity will always depend, in a great measure, upon the attention given to them; and nothing can be so fatal, as neglect and indifference. But there is always danger, that direct encouragement to schools, by donations of money, shall make their friends overconfident in regard to them, and thus lead them to relax or draw off their attention. Great care must evidently be necessary, so to bestow the public bounty as to increase the interest taken in them, by those immediate friends on whose personal care they must still depend for every thing most vital about them. It would seem prudent, in the prospect of having large sums annually to disburse for the furtherance of this dearest interest of the people, that an agent should be employed by the legislature, to enable them the better to judge whether the bounty of the state were or were not producing the good intended.

5. He could reduce to shape and symmetry, the now disjointed materials of what might be a beautiful system. Much is said of our system of schools. But it is evident, there is little of system about them. They are of all grades of excellence, and, from their absolute independence, of every variety of form, or fabric, that reason or fancy could frame. This would be of less consequence, if the same teachers usually remained, for a series of years, in the same schools. But, in this respect, there is continual change, and a teacher, who has become accustomed to a certain order of things, as to discipline, arrangement, studies, and text-books, is very often condemned to waste his own time, and that of his pupils, by passing to another school, of an order, in all these particulars, entirely different. The want of some superintending and regulating authority is, we fear, grievously felt, in the greater number of the common schools. There is now no concert of action; and, from the nature of the case, there can be none, without the direct or indirect interference of the legislature, through their authorized agent.

6. He could collect, and present to the legislature, the experience of other states, and foreign countries, on subjects interesting to the common schools. The peculiar position of the American Republic, in reference to foreign nations, at once remote by its situation and near by its relations, has enabled it to avail itself of the improvements in the arts and sciences of all the world; and, in a single half century, to place itself, in these respects, among the foremost of the earth. It is to be hoped that Massachusetts, at least, will not be less wary to take advantage of its situation, in reference to the essential interests of education.

Several of the states of Germany have, with wise policy, put into operation systems for the complete education of all their inhabitants. The government of France is, at this moment, earnestly engaged in the same work. No doubt, it is from a conviction that the essential welfare of a state mainly depends on the education of its citizens, that the government of these nations, some of them almost unlimited monarchies, have adopted a course which would seem to belong especially to republics. They have felt that, from the great onward movement that the common mind of Europe has made, in this long interval of peace, they could not hold their place in the family of nations, but by putting forth all their energies; and that those energies could only be brought out by the action of a system

of national instruction in the common schools. Their experience is now before us.

7. From a knowledge of the condition and wants of the agricultural population of the state, a superintendent of the common schools could do much toward enabling the legislature to determine the question, whether any thing can be done, better to adapt the instruction given in the common schools to those wants, or whether separate institutions for that purpose may, with advantage, be established.

From a similar knowledge of the manufacturing population, he could suggest improvements, if any are to be made, in the schools specially intended for that population.

Lastly, his knowledge of the whole system would enable him to recommend improvements, where practicable, of a general nature. Can further instruction in the useful arts be introduced into all the schools? Can a higher moral influence be exercised; thus to do something more to prevent the crimes which it now costs the state so much to punish? Can any thing be done to instruct youth in their rights and duties as citizens; thus adapting, more particularly to the wants of the future freemen, schools formed after the model of those intended for the subjects of a monarchy?

Your memorialists trust that they have said enough, to show that the general charge of the oversight of the common schools of the Commonwealth would afford abundant employment to an individual of the most eminent abilities, whatever energy, activity, and devotion he might bring to the office.

They believe that the schools, and, through them, the whole population of the state, would be benefited by the appointment of a competent superintendent; and, moreover, that the good effected would be greater, in proportion, if he should act on a system to be extended through several years, than if the experiment were to be confined to a single year.

To show that they do not give undue prominence to this office, they beg leave to refer to the example of Russia, Prussia, France, and several others of the most enlightened governments of Europe, in which the charge of public instruction constitutes a separate department, equal, in rank and consequence, to any other whatever. All these states we have long looked upon as friends. Even if they were our enemies, it would still be wise in us to borrow from them an institution, which promised to be as useful among us as it showed itself among them. That proudest nation of antiquity, which extended its arms and its laws to the limits of the known world, never disdained to adopt, from a conquered nation, whatever custom or art it found superior to its own.

Moved by these considerations, your memorialists respectfully pray you to consider the expediency of appointing, for a term of years, a superintendent of the common schools of the Commonwealth.

For the Directors of the American Institute of Instruction.

GEORGE B. EMERSON,
S. R. HALL,
E. A. ANDREWS. } *Committee.*

II. VERBAL REALISM.

[Translated for the American Journal of Education, from the German of Karl von Raumer.]

Thus we perceive that the circle of studies, both at the schools and universities of that period (the sixteenth century, and thereabouts,) was extremely limited, compared with that of the present day. It is abundantly evident, as I have repeatedly remarked, that all the time and energy of youth was devoted to the acquisition and the practice of Latin eloquence. A many-years' course in grammar was submitted to for the sake of correctness of speech, in logic for the sake of precision of thought; and history was taught in order to furnish the material for the display of rhetoric, either in speaking or in writing. Nothing was thought of, but disputations, declamations, and the acting of the plays of Terence. The classics were read merely for the purpose of gleaning from them phrases to be used in constructing Latin sentences; and, provided that an agreeable fullness and cadence was thereby secured to the expression, but little heed was given to the contents. Such we find to have been the spirit of education among the Protestants, equally with the Jesuits; Trotzendorf and Sturm, Wurtembergers and Saxons, agreeing herein with the Jesuit general, Claudius di Aquaviva.

Nevertheless, in the more liberal-minded Erasmus, there appeared indications of a rebellion against this universal tendency: with him arose a new type of culture, which may be appropriately styled "verbal realism." This we will now endeavor to analyze, in order in the sequel to distinguish it more clearly from "real realism."

Erasmus demanded of the grammarian or philologist (and it would really appear self-evident,) that he should learn many things, without which, he would be in no condition to understand the classics. For instance, he insisted upon a knowledge of geography, arithmetic, and natural science. He did not, however, exact that perfect and full acquaintance with these topics possessed by the adept, but only a general knowledge of them all, which, nevertheless, was a great advance on the profound ignorance which had hitherto been acquiesced in.

As in so many other literary aspirations and achievements, Melancthon, in this matter also, followed in the wake of Erasmus. We have seen that, even while at Tubingen, he did not rest contented with philological pursuits alone, but used every endeavor to acquire universal

knowledge, turning his attention to physics, mathematics, astronomy, history, and medicine, and all his life he remained true to this desire for universal culture.

In what spirit he studied all these sciences, especially the natural, he intimates in many places. Thus, in the dedication to his physics, addressed to Meienburg, the Mayor of Nordhausen, he says: "Although the nature of things can not be absolutely known, nor the marvelous works of God be traced to their original, until in that future life we shall ourselves listen to the eternal counsel of the Father, Son, and Holy Spirit, nevertheless, even amid this our present darkness, every gleam and every hint of the harmony of this fair creation forms a step toward the knowledge of God and toward virtue, whereby we ourselves shall also learn to love and maintain order and moderation in all our own acts. Since it is evident that men are endowed by their Creator with faculties fitted for the contemplation of nature, they must, of necessity, take delight in investigating the elements, the laws, the motions, and the qualities or forces of the various bodies, by which they are surrounded." "The uncertainty which obtains with regard to so much in nature," he says elsewhere, "should not deter us from our search, for it is none the less God's will that we trace out his footsteps in the creation." "Let us prepare ourselves," he continues, "for admission to that enduring and eternal Academy, where all the imperfections of our philosophy shall vanish in the immediate presence of the Master-Builder, who there shall Himself show us his own archetype of the world."

"Many," he proceeds to say, "will smile at these Aristotelian beginnings; but they are the rudiments of what is destined, one day, to become a perfected philosophy. Were the powers of men on a greater scale than we find them, still their knowledge must, as now, proceed from small beginnings. In such a plain and simple manner might Adam once have taught his son, Abel, philosophy; pointing him to the heavens, the stars, the land, the water, teaching him of the times and seasons, and, in all his teachings, directing him up to God the Creator."

Further on he admonishes the learner, with an intelligent choice to read the best authors on physics, to avoid all controversy, and to make use of a faultless Latin style. "For," he says, "he who takes pains to weigh his words will form a clear conception of the objects he is describing. Where, on the contrary, a person coins uncouth and strange words, his ideas will be sure to be crude and anomalous; as in the writings of Scotus and his fellows, you will not merely find the language corrupt, but likewise that vague shadows of truth, or it

may be dreams, have been summoned up, and new words formed to express them."

Then he relates how Paul Eber, in connection with himself, has projected the text-book in question, upon the basis of Aristotle. And he adds his caution against the course of those who deem it a mark of genius to make a parade of high-sounding sentiments; for "the right spirit in the quest of truth consists in the love of truth." Science must be applied to life. "The church too is benefitted by these physical studies; as, for instance, we have often to speak of the harmony of the creation, so, likewise, of the derangement of this harmony, and the evils which God has visited upon man in consequence of the fall." While preparing his psychology, in which he treats of the entire nature of man, he sought an interview with the Nuremberg doctors of medicine, and requested the celebrated Leonard Fox to send him communications upon anatomy, temperaments, &c. His enthusiasm for astronomy, he expresses thus, in his preface to John Sacrobusto's book on the sphere. This book he thinks peculiarly adapted to schools, "because the author understood how, from the great mass of astronomical facts, to select the simplest and most essential." Then he praises the study of astronomy, and quotes, with commendation, Plato's saying, "that it was to gaze upon the stars that eyes were given to men. For to look at it, the eye itself would seem to bear an affinity to the stars." "And then too, the perdurable harmony of the starry heavens bespeaks a God. Thus, philosophers, who despised astronomy, were atheists, denying our immortality. The interpretation of the Holy Scriptures, and the conduct of life, equally called for a knowledge of astronomy. What would become of men, had they no chronology for the past, no calendar for the present? Neither the church nor the state could stand without it." And further on, he lauds the Germans, Purbach and Regiomontanus, through whose labors, astronomy, after being in disrepute for centuries, had been again brought into honor. Thus those Epicurean theologians, who scorned and rejected, not astrology alone, but a firmly-based scientific astronomy also, had more need of the physician than the geometer, to be cured of their madness. In the preface to his edition of Aratus, addressed to Hieronymus Baumgartner, he says, "the knowledge of nature we must learn from the Greeks; Aratus throws light upon much in the Latin poets." And against the enemies of mathematics, he bears the following testimony, in a letter to Camerarius, "I can only laugh over your anger that my recommendation of mathematics has been condemned. In it I had no other aim, than to restore to the schools the right use of this science, and to allure youth to the

study of it. This I have desired, and for this will I labor, so long as any opportunity is left to me to help forward the cause of sound learning." But how ill it must have fared with the mathematics, when, as we have elsewhere cited, the mathematical professor at Wittemberg, lectured upon simple numbers, or the four primary elements of arithmetic; this fact, of itself, forms a practical comment on the entire neglect into which arithmetic had fallen in the schools.

But much as Melancthon's defense of astronomy and mathematics merits our approval, yet we must not close our eyes to the fact that, he, like so many of his contemporaries, was a firm believer in the superstitions of astrology.* In support of this belief, he cites the saying of Aristotle, that "the world is under the dominion of the heavens." Neither the learned treatise of Picus di Mirandola against astrology, nor Luther's hearty contempt for it, could ever wean him from this superstition, as is evinced by the practical use he made of it throughout his life.

In common with many eminent astronomers of that day, he adhered to the Ptolemic system, and this, although his friend and colleague, Erasmus Reinhold, was among the first to recognize the claims of Copernicus. And truly, what an entire change, both in modes of thought as well as in text-books, was called for by that great work of Copernicus, "*On the revolutions of the heavenly bodies;*" for it required every work on astronomy to be rewritten, every opinion, and every method of instruction, to be reconsidered.

Allusion has already been made, in another part of this work to Luther's earnest and lively recommendation of the study of the "*real*" sciences, such as history, mathematics, astronomy, and music.

But, despite all the expostulations of Erasmus, Melancthon, and Luther, these studies, as we have had occasion to observe, were sadly neglected, both at schools and universities; nor did they begin to receive a gradually increasing attention until the seventeenth century.

But what are "reals," and what is "realism?" These questions are not easy to answer, even after all that we have said in elucidation of them. Our task, however, will be simplified, if we divest ourselves of the views and conceptions obtaining on this subject at the present day, and confine our thoughts to the sixteenth century. The philologist of that period aimed, in the study of the classics, at a twofold object. In the first place, he applied himself merely to the lan-

* He thus writes of his son-in-law, Sabinus:—"Sabinus is of a head-strong nature, and will not listen to advice; this is due to the conjunction of Mars and Saturn, at his nativity, a fact which I ought to have taken into account, when he asked the hand of my daughter." And, because the mathematician, Hassfurt, who cast his nativity when he was a boy, had predicted that peril would befall him from the North Sea, and the Baltic, he declined invitations both to Denmark and to England.

guage of ancient authors, grammatically, as he considered its etymological and syntactical forms; critically, as he scrutinized the accuracy of the text; and æsthetically, while he weighed the expression and the rhythm of the prose writer or the meter of the poet. At the same time he read both prose and poetry, with constant reference to a more and more perfect imitation of them, both in speaking and in writing. And, secondly, he applied himself to the contents, whatever they might be, whether they related to war or to peace, to affairs of state, to nature, art, mythology, etc. This study of the contents of an author was afterward styled the study of "reals," to distinguish it from that of language alone. Such was that study upon which Erasmus and Melancthon laid so much stress; but it was nevertheless by no means conducted independently of the ancients, being based in great part upon their writings, and then, in turn, used as indispensable aids in their interpretation.

Let the reader imagine himself, on the one hand, regarding solely the language of the classics, and taking their subject into account only where this is required to throw light on the words; and, on the other hand, penetrating to the subject-matter of an author, and giving no more attention to the phraseology than is absolutely necessary to an understanding of that subject-matter. In this latter case, his ideal will be to convert the language into a perfectly transparent medium, and to read the classics without embarrassment, as though Greek or Latin were his mother tongue.

Reading the classics out of pure regard for the language, belongs chiefly to the professional philologist. This study of language, in and for itself, might be called pure philology, after the analogy of the pure mathematics. These have to do, for instance, with unknown quantities, with numbers in the absolute, with algebraic formulæ. And, as the pure mathematics are applied to astronomy, optics, acoustics, etc., becoming the handmaid to these sciences, so pure philology ministers to the purposes of the historian, the archæologist, etc.

This contest between "reals" and "verbals," had presented itself, as we have seen, to the minds, both of Erasmus and Melancthon; but the terms "reals" and "realism" were not, so far as I can learn, employed by either of them. Nor is this strange, if we consider that they flourished near the period when the term "realism," introduced by the scholastics, as contrasted with "nominalism," had a meaning wholly unlike that of the same term in its present acceptation.

When this term first began to change its original meaning, we may gather from a treatise by the well-known philologist, Taubmann,

which appeared in the year 1614. In this he says, "there is one thing which has often excited my surprise, and that is, if any one devotes unusual care to the acquisition of a graceful and elegant style, young men, and sometimes even the teachers of young men, will call him, by way of derision, philologist, critic, and grammarian, or, in one word, verbalist; but to themselves they arrogate the new name of realists, thereby intimating that their concern is with things alone, while those others, wholly absorbed in language, overlook the matter spoken of."

It will be observed that realists are here contrasted, not with humanists, but with verbalists. *Verba valent sicut nummi.* Evidently, then, the realists to whom Taubmann alludes, found their advantage in fastening upon their opponents the epithet verbalists; for thereby they branded them as dealers in words, who pursued the shadow and lost the substance. In our day, however, the tables are turned, since the verbalists have assumed the new title of humanists, and, by so doing, have given the realists, in no vague manner, to understand that they count them for barbarians, and, as such, destitute of all ennobling culture.

"But," my readers may ask, "what is to be understood by the expression 'verbal realism?' Is it not a contradiction in terms?" Apparently it is; yet we shall see, in the sequel, that besides the general distinction between "verbals" and "reals," there also subsists a twofold division of realism itself; viz., into verbal and real. Some indications of this latter division we have already met, in the close of our sketch of the earlier universities. Here, for instance, astronomy was taught without an observatory, anatomy without dissections, botany without herbals, natural philosophy without experiments, all from books,—Aristotle, Pliny, Aratus, Galen, etc.,—and this knowledge was then made use of in turn for the elucidation of the same books from whence it was drawn. Such was "verbal realism" in those times, and such is it likewise in our day! The meaning that we attach, on the other hand, to the phrase "real realism," will appear more clearly in the light of the succeeding chapter upon Lord Bacon.

III. LORD BACON,

HIS PHILOSOPHY, AND ITS INFLUENCE UPON EDUCATION.

(Translated from the German of Von Raumer, for the American Journal of Education.)

Francis Bacon was born at London, on the 22d of January, 1561. His father, Nicholas Bacon, was Lord Keeper of the Seal, in the reign of Queen Elizabeth; his mother, whose maiden name was Anna Cook, was a pious and highly intellectual lady, well versed both in the Greek and Latin classics. When quite young, Bacon displayed such a mature judgment, that Queen Elizabeth, who took great pleasure in conversing with him, addressed him as her little Keeper of the Seal. When not quite sixteen years of age, he was placed at Trinity College, Cambridge. His principal instructor there was John Whitgift, a doctor of theology, and afterward Archbishop of Canterbury. While at Cambridge, he bestowed diligent study upon Aristotle, but with all his regard for him, he conceived a distaste for his doctrines; and, even from this early period, we may date the commencement of his warfare against scholasticism.

After he had completed his education at the university, his father, wishing to initiate him in politics, commended him to the charge of Paulett, English ambassador at the Court of France. During Bacon's residence at Paris, his father died, leaving but a moderate property to be divided between himself and his four brothers. In after years, his brother Anthony bequeathed him an independent fortune.

On his return to England, he applied himself with ardor to the study of law, and was soon chosen councilor by Elizabeth; but she did not advance him to any higher post of honor. This was reserved for James I., who made him Lord High Chancellor, with the titles of Verulam and Vice-Count St. Albans.

He married the daughter of a wealthy London alderman, whose name was Burnham, by whom, however, he had no issue.

Six years before his death, he was deposed from his office. And that he had been guilty of misdemeanor therein, is, alas! but too evident. He was convicted of having used his high judicial function in the service of bribery, and James I. could do no more than mitigate the sentence that was pronounced against him, nor could he

ever afterward recover the influence that he had lost, though he sought it with the most fulsome flatteries.

It is truly painful to see a man of such commanding talents sink into such depths of moral degradation. It would appear, in some instances, as if an over-exertion of the intellectual powers operated to the injury of the moral nature; since constant mental labor leaves no time for self-consecration and self-conquest, yea, in the end, destroys all power and capacity therefor,—so much does such labor engross the whole man.

But the closing years of Bacon's life redounded to the inestimable advantage of science; for he gave his undivided attention to it, after his removal from the service of the state.

He died on the 9th of April, 1626, in the 66th year of his age, having lived to be three years older than Shakspeare, whom he survived ten years. Seldom have two such eminent men lived at the same time, and in the same place,—men of such vast, and yet opposite endowments. It would almost appear that, in Bacon, the genius of prose, in Shakspeare, of poetry, came into the world in person: in one, an understanding, the highest, clearest, most searching, and methodical; and, in the other, an imagination of unbounded creative capacity. The poet, it is true, manifested a keen intellectual insight, together with a wonderfully comprehensive knowledge of human nature; but we can hardly concede to Bacon much of that sense of beauty which is so marked an attribute of the poet. Both of them, however, were alike in achieving superior fame by the exercise of their understanding, and in suffering the glory of that fame to be tarnished by the abuse of their imagination. How far justice was meted out to Bacon, we shall be better able to judge in the sequel.

A third great genius, born in the same decade with Shakspeare and Bacon (1571,) deserves mention here, as ranking with the mightiest minds that the world ever produced; I refer to Kepler. But what a remarkable contrast does the mutual non-intercourse of these three giant spirits present to the warm and living fellowship that subsisted between Luther and Melancthon. It is as though they had not known of each other's existence. Bacon, notwithstanding the universality of his writings, has no where made mention of Shakspeare; he treats of dramatic poetry, but utters not a syllable in regard to the greatest dramatist "that ever lived in the tide of times," although this one was even his fellow-citizen. So, likewise, Bacon treats often of astronomy, and introduces Copernicus and Galileo, but Kepler never. And yet, Kepler must have been known to him, for, in the year 1618, he dedicated his great work, "*Harmonice Mundi*," to the

self-same King James whom Bacon revered as his great patron, and, in many of his own dedications, had styled a second Solomon.

Bacon's works have appeared in repeated editions, both in separate treatises and in a collected form. Many of them have no bearing upon our present inquiry; such, for instance, as the "*Political Speeches*," the "*Essays, Civil and Moral*," the "*History of the Reign of Henry VII.*" etc. On the contrary, his philosophical works proper are of the utmost value in their relation to the science of education, although, on a cursory glance, it may not appear so. What Bacon advanced directly on this subject, is comparatively unimportant; but the indirect influence which, as the founder of the inductive method of philosophizing upon nature, or "*real realism*," as I have elsewhere styled it, he exerted upon education, this, though we are unable always to analyze it, is nevertheless invaluable. The reader will therefore follow me without surprise, if, in the succeeding pages, I shall appear to have lost sight, for a time, of the purely educational element.

Bacon has himself given us a sketch of the great philosophical work, which he designed to write, and parts of which he completed. The work was called "*Instauratio Magna*," and it was divided into six parts. The first part was an encyclopedia of all human learning, whether ancient or modern. In this he purposed, especially, to point out deficiencies, and suggest new subjects of inquiry. This part we have; it is the "*De dignitate et augmentis scientiarum*," in nine books, and is the best known of all his works. Some portions of it are completely elaborated; others consist of a more or less thoroughly meditated plan. The second part of the "*Instauratio Magna*," Bacon published under the title of "*Novum Organum, Sive judicia vera de interpretatione Naturæ.*" He worked upon this part for many years; at his death, there were found twelve different elaborations of it. It is a collection of great thoughts, remarkable for their depth, their freshness, and the extreme nicety with which they are adjusted, the one to the other,—and all are intelligibly expressed in aphorisms, whose every word we feel has been carefully weighed.

The third part of the "*Instauratio Magna*" was designed to present a collection of the facts of natural history, and experimental philosophy, or "*Phænomena universi:*" some portions of this were completed. In the fourth part, or "*Scala intellectus*," Bacon gives special applications of his philosophy in examples of the correct method of investigating nature. The fifth, or "*Anticipationes philosophiæ secundæ*," was to be a sketch of the preparations of preceding ages for the final introduction of the new philosophy; while the sixth was to em-

body the new philosophy, in all its completeness and grandeur. This crowning part of the whole work Bacon left wholly untouched.

We shall confine our attention, at the present time, however, chiefly to the two first and completest divisions of this great work, viz., to the "*De augmentis scientiarum*" and the "*Novum Organum*." But, in order to judge Bacon aright, we must first cast a glance at the intellectual character, not only of the age in which he lived, but of the centuries just preceding.

We have seen that, in those centuries, supreme homage was paid to the word alone in all books, in disputations and declamations, and that thinking men displayed neither sense nor feeling for any thing but language, deriving from this, and basing upon this, all their knowledge. Every avenue to nature, to a direct and independent investigation of the external world, was closed. That gifted monk, Roger Bacon, a most worthy predecessor of Lord Bacon, was, in the middle ages, regarded as a magician; and, as a magician, suffered persecution, because he was not content to view nature through the eyes of Aristotle, choosing rather to go himself to the fountain-head and converse with her, face to face. He maintained that men ought not to be satisfied with traditional and accepted knowledge. Reason and experience were the two sources of science; but experience alone was the parent of a well-grounded certainty, and this true *empiricism* had hitherto been wholly neglected by most scholars. That Roger Bacon did not speak of experimental knowledge, as a blind man would discourse of colors, is proved by some remarkable expressions of his, anticipatory and unambiguous, upon spectacles, telescopes, and gunpowder. But Roger stood alone in that age of the world, like a solitary preacher in the desert; and hence it was that he was regarded with wonder, as a magician, and persecuted.

But that which showed in Roger Bacon as mere anticipation, and obscure prophecy, appeared, after the lapse of three hundred years, full-formed and clear in Francis Bacon. Even as Luther came forth to strip off the thick veil of human traditions, that had been woven over the revelation of God in the Holy Scriptures, distorting its features, concealing it, and even burying it in oblivion, for multitudes of his fellow men, so did Bacon make war upon the traditions and postulates of men, which had quite darkened over the revelation of God, in the material world. He wished men no longer to put their faith in arbitrary and fanciful glosses upon this revelation, but to go themselves directly to its living record.

He saw, moreover, that the more sagacious intellects of his time were wholly divorced from nature, and wedded to books alone; their

energies all expended upon words, and belittled by the endless hair-splitting subtleties of logic. He perceived that the physical philosophy current among his contemporaries, was gathered from Aristotle, or his disciples; and that it no where rested upon the solid basis of nature. Men read in books what authors *said* concerning stones, plants, animals, and the like; but to inspect these stones, plants, and animals, with their own eyes, was far enough from their thoughts. And hence were they compelled to defer to the authority of these authors, whether they would or no, because they cherished not the remotest idea of subjecting these descriptions and recitals to the test of actual experiment. Consider, too, that such test was the more needed, since these very authors had, mostly themselves, received their information even from third or fourth hands. We are amazed when we read the farrago of incredible and impossible stories, in which the books of natural history, especially those of the middle ages, abounded; when we contemplate, for example, the monsters to which we are introduced in the zoölogies of this period, or the marvelous virtues which were foolishly claimed for various stones, &c. And even if these books, thus treating of nature, did contain many things that were true, yet it was manifest, that progress in natural science was not to be hoped for, so long as men remained satisfied with their teachings. And how, I ask, could men have been otherwise than satisfied, when they appeared not even to realize the existence of nature, the mighty fountain-head of all authorities.

Now, from this unworthy and slavish homage and deference to authors, authors too, mostly, with no title to confidence, Bacon purposed to recall men, by inviting them to a direct communion with the creation around them, and by pointing them to those eternal truths, whose obligation they were bound humbly to acknowledge, and yet whose claims would never tarnish their honor.

For an implicit obedience to nature is attended with a double reward, viz., an understanding of her processes and dominion over her. "Forsooth," he says, "we suffer the penalty of our first parents' sin, and yet follow in their footsteps. They desired to be like God, and we, their posterity, would be so in a higher degree. For we create worlds, direct and control nature, and, in short, square all things by the measure of our own folly, not by the plummet of divine wisdom, nor as we find them in reality. I know not whether, for this result, we are forced to do violence to nature or to our own intelligence the most; but it nevertheless remains true, that we stamp the seal of our own image upon the creatures and the works of God, instead of carefully searching for, and acknowledging, the seal of the Creator, mani-

fest in them. Therefore have we lost, the second time, and that deservedly, our empire over the creature; yea, when, after and notwithstanding the fall, there was left to us some title to dominion over the unwilling creatures, so that they could be subjected and controlled, even this we have lost, in great part, through our pride, in that we have desired to be like God, and to follow the dictates of our own reason alone. Now then, if there be any humility in the presence of the Creator, if there be any reverence for, and exaltation of, his handiwork, if there be any charity toward men, any desire to relieve the woes and sufferings of humanity, any love for the light of truth, any hatred toward the darkness of error,—I would beseech men, again and again, to dismiss altogether, or at least for a moment to put away, their absurd and intractable theories, which give to assumptions the dignity of hypotheses, dispense with experiment, and turn them away from the works of God. Then let them with teachable spirit approach the great volume of the creation, patiently decipher its secret characters, and converse with its lofty truths; so shall they leave behind the delusive echoes of prejudice, and dwell within the perpetual outgoings of divine wisdom. This is that speech, and language, whose lines have gone out into all the earth; and no confusion of tongues has ever befallen it. This language we should all strive to understand; first condescending, like little children, to master its alphabet." "Our concern is not," he says in another place, "with the inward delights of contemplation alone, but with all human affairs and fortunes, yea, with the whole range of man's activity. For man, the servant and interpreter of nature, obtains an intelligent dominion over her, only in so far as he learns her goings on by experiment or observation; more than this, he neither knows, nor can he do. For his utmost power is inadequate to loosen or to break the established sequence of causes; nor is it possible for him to subjugate nature, except as he submits to her bidding. Hence, the twin desires of man for knowledge, and for power, coincide in one; and therefore the ill-success of his operations springs mainly from his ignorance of their essential causes."

"This, then," he continues, "is the substance of the whole matter, that we should fix the eyes of our mind upon things themselves, and thereby form a true conception of them. And may God keep us from the great folly of counting the visions of our own fancy for the types of his creation; nay, rather may he grant us the privilege of tracing the revelation and true vision of that seal and impress which he himself has stamped upon his creatures." In another place Bacon entreats men "for a little space to abjure all traditional and inherited

views and notions, and to come as new-born children, with open and unworn sense, to the observation of nature. For it is no less true in this human kingdom of knowledge than in God's kingdom of heaven, that no man shall enter into it except he become first as a little child!" Man must put himself again in direct, close, and personal contact with nature, and no longer trust to the confused, uncertain, and arbitrary accounts and descriptions of her historians and would-be interpreters. From a clear and correct observation and perception of objects, their qualities, powers, etc., the investigator must proceed, step by step, till he arrives at axioms, and at that degree of insight, that will enable him to interpret the laws, and analyze the processes of nature. To this end, Bacon proffers to us his new method, viz., the method of induction. With the aid of this method, we attain to an insight into the connection and mutual relation of the laws of matter, and thus, according to him, we are enabled, through this knowledge, to make nature subservient to our will.

"Natural philosophy," he says in another place, "is either speculative or operative; the one is concerned with the invention of causes, the other with the invention of new experiments. Again, speculative natural philosophy, or theory, is divided into Physic and Metaphysic. Natural history describes the variety of things; Physic, the causes, but variable or respective causes. As, for instance, it seeks to know why snow is white; but Metaphysic inquires after the true nature of whiteness, not only as it finds this quality in snow, but also in chalk, silver, lilies, &c. Thus Metaphysic mounts, at last, to the knowledge of essential forms, or absolute differences,—the Ideas of Plato. These forms constitute the ultimate aim of science. Physic leads, through acquaintance with immediate causes, to Mechanic; but Metaphysic, by virtue of dealing with ultimate forms, leads to Magic. Thus mechanic and Magic carry into practice what Physic and Metaphysic advance as theory. The knowledge of occult forms brings the power to work marvels."

Natural philosophy Bacon compares to a "pyramid, whose basis is Natural History; the stage next the basis, is Physic branching into Practical Mechanic; the stage next the vertical point, is Metaphysic. As for the vertical point, '*Opus quod operatur Deus a principio usque ad finem*,' the summary law of nature, we know not whether man's inquiry can attain unto it."

Thus have we given a very general sketch of the positive side of the Baconian philosophy. Its gradations are as follows: beginning at observation and experiment, it lays down, by a process of induction, higher and higher axioms, till at last it penetrates to essential

forms, increasing insight adding ever new vigor and breadth to experiment.

But Bacon well knew that many obstacles stood in the way of the reception of his new philosophy, and that he must first remove these obstacles. The greater portion of his "*Novum Organum*" is accordingly occupied with polemics.

Idols and false notions, he says here, govern the human understanding to that degree that, before the introduction of any positive system of truth, they must all be cleared away, and men be warned against them. There are four kinds of idols.

Idols of the Tribe; or generic, and founded in the universal nature of mankind.

Idols of the Cave; or specific, growing out of the diversities of individual character.

Idols of the Forum; or such as proceed from the social relations of men.

Idols of the Theater; or those which have been forced into the human mind by successive schools of philosophy, creating, as it were, fictitious or scenic representations of life.

I will now extract, from Bacon's exposition of these various idols, some remarks, bearing upon education. "It is false," he says, "to assert that our senses are the ultimate measure of the world; all the perceptions of the senses, as well as all the conceptions of the mind, find their correspondences in the nature of man, not in the being of the universe. The human understanding receives the rays that stream from created objects, as an uneven mirror, which mingles its own nature with that of the object it reflects, giving to them false shapes and colors."

Bacon here disclaims that absolute knowledge of objects, which penetrates to the essence of their being; for such all-sufficient knowledge is the prerogative of God alone. Our point of view is forever outside of the center of the universe. But yet he does not appear to realize the intimate connection of this view with the fall of man, and the conditions affixed, in consequence thereof, to human learning. For even were the knowledge possible to man radical and complete, yet it reaches only to the border-land, beyond which lie the inscrutable mysteries of the Deity. These mysteries man can prefigure and believe, but never fathom.

"The human intellect is led by its very essence to assume a greater order and equality in nature than it actually finds." In another place he says, "The light of the understanding is not a clear light, but it is clouded by the will and the affections. Hence man rejects

that which is difficult, because it calls for patient inquiry; that which is moderate, because it narrows his hopes, &c." How appropriate is this remark in the education of the young, and how little is instruction based upon just views of the relation between the will and the understanding, and upon the taste or distaste of pupils for given pursuits; and how evident it is, that the will must be animated by the conscience, where the gifts of intellect have been sparingly bestowed!

"Some minds are lost in admiration of antiquity, others in the passion for novelty, but only the select few are so well balanced as to keep a medium course, and neither to pull down that which has been skilfully built up by the ancients, nor to despise that which has been well done by the moderns."

This remark should serve to encourage teachers, especially at the present day, when a superstitious reverence for antiquity is engaged in active conflict with a superstitious regard for whatsoever is new. Further on, Bacon attacks the various philosophies which have been in vogue at different periods. "The devotees of science have been either empiricists or dogmatists. The empiricist, like ants, have heaped up only that which they could put to use; and the dogmatists, like spiders, have spun threads out of their own bowels. The bees, on the contrary, hold a course midway between these two; for they sip of the flowers of the field and garden, and the nature of these they change and distil, by virtue of the force that is in them. So a true philosophy is not effective alone, or chiefly, by the power of thought which it contains, nor does it proceed out of a memory filled with the results of observation and experiment, but all its stores are changed and assimilated by the understanding." He likewise censures "an undue respect for authorities, and that too common error of opinion, that nothing new remains to be found out." He condemns sin as the bane of all knowledge. He says, "men have entered into a desire of learning and knowledge, not for the benefit and use of their fellows, but from a natural curiosity and inquisitive appetite, for victory of wit and contradiction, or for lucre and profession." Most sharply does he castigate liars. "Knowledge is nothing else than a representation of truth; for the truth of being and the truth of knowing are one, differing no more than the direct beam and the beam reflected."

Highly instructive to us also are his repeated attacks upon the Greeks. "The wisdom of the Greeks," he says, "was rhetorical, expended itself upon words, and had little to do with the search after truth." Their philosophers, according to him, even Plato and Aristotle, were altogether sophists; a few of the graver and more earnest

spirits of an earlier period, like Empedocles, Anaxagoras, &c., excepted. True, indeed, was that saying of the Egyptian priests, "the Greeks continue children forever, having neither an antiquity of science, nor a science of antiquity. For they have the nature of boys, inasmuch as they are full of loquacity, but incapable of reproduction, and their wisdom is therefore rich in words but poor in deeds."

Elsewhere, he says, "To speak truly, '*antiquitas seculi, juventus mundi*,' and *these* times are the ancient times, when the *world* is ancient. Hence those elder generations fell short of many of our present knowledges; they knew but a small part of the world, and but a brief period of history; we, on the contrary, are acquainted with a far greater extent of the old world, besides having uncovered a new hemisphere, and we look back and survey long periods of history."

This passage is the embodiment of that ultra anti-classical view, against which, in Bacon's own day, Bodley, and, in our own times, Goethe, have so earnestly protested. How prejudicial to the cause of education it must be we can readily imagine, for it sounds in our ears with the authority of a voice from the past, cheering on our narrow-minded realists in their opposition to the study of the ancients.

But though it is not possible for us entirely to exculpate Bacon in this his judgment of antiquity, yet, in strict justice, we ought to make all due allowance for his point of view. His was the philosophy of nature; a knowledge of nature, and power over her by virtue of that knowledge, were his aim. "What have the ancients done in this particular," he asked; but gave no thought to Homer, Sophocles, Demosthenes, and Phidias; and seeing, as in a vision, the air-pumps, electric telegraphs, and steam-engines, the seventy-eight thousand species of animals, the seventy-eight thousand species of plants, of our day,—seeing all these rewards of knowledge and power, which were to flow from the adoption of his method, he looked upon the ancients with indifference. But even from this point of view, he should have conceded to them far more than he did. It is enough that we mention the determinations of latitude and longitude, the length of a meridian, the precession of the equinoxes; enough that we speak of the great Hipparchus, of Archimedes, and Apollonius of Perga, of Hippocrates, of Aristotle's "History of Animals," and the "Garden of Plants" of Theophrastus. And how much more could I bring forward in proof of the greatness of the Greeks, even in natural philosophy! And, more than all, what shall we say of those great fundamental thoughts, which have tested the human intellect for more than two thousand years?

Bacon's hostility to Aristotle was mainly to be ascribed to the scholastics, who called themselves his disciples, though their master's works were not known to them, save through the medium of unfaithful translations. He concedes to them "sharp wit" indeed, but adds "that it only worked upon itself, as the spider worketh her web, and brought forth mere cobwebs of learning, and nothing more."

But we find him no more favorable to the anti-scholastics, whom we may style the philologists of the fifteenth and sixteenth centuries. "At the time of Martin Luther, an affected study of eloquence began to flourish. There arose a great enmity and opposition to the scholastics, because they considered no whit the pureness of their style, but took the liberty to coin and frame new and barbarous terms of art, to express their own sense, and to avoid circuit of speech. This enmity speedily ended in producing the opposite extreme; for men began to hunt more after words than matter, and more after the choiceness of the phrase, and the round and clean composition of the sentence, than after the weight of matter, soundness of argument, life of invention, or depth of judgment. Then did Sturmius spend such infinite and curious pains upon Cicero and Hermogenes. Then did Erasmus take occasion to make the scoffing echo, '*Decem annos consumpsi in legendo Cicerone*,' and the echo answered in Greek, 'Ὄνε,' *asine*." "In sum," he concludes, "the whole inclination and bent of those times was rather toward *copia* than weight."

We have now sufficiently characterized Bacon's polemics. The foregoing paragraph proves that he regarded what the philologists of the sixteenth and seventeenth centuries styled realism, as wholly distinct from the realism that his philosophy required. This latter I have ventured to call "real realism," in contrast with the verbal realism of the philologists, who knew roses and wine only as they were described in the verses of Anacreon and Horace.

Though there were many before Bacon, especially artists and craftsmen, who lived in communion with nature, and who, in manifold ways, transfigured and idealized her, and unveiled her glory; and though their sense for nature was, in a measure, highly cultivated, so that they attained to a practical understanding of her ways, yet this understanding of theirs was, so to speak, at its highest, merely instinctive; for it led them to no scientific deductions, and yielded them no thoughtful, sure, and legitimate dominion over her.

To the scholars of that day Bacon's doctrine was wholly new. It summoned them to leave for a while their books, which had been their vital element,—

"And with untrammeled thought
To talk with nature, face to face."

Thus Bacon was the father of the modern realists, and, as I shall take occasion to show hereafter, of realistic principles of instruction. Traces, moreover, are to be found in him of the harsh and repulsive features which characterize our modern matter-of-fact philosophy. As an instance in point, consider the sentence which he pronounced against the ancients; how he weighed them in the scales of his own philosophy, and found them wanting; how low an estimate he set upon what they did bring to pass, counting it all as the result of pure accident, because not arrived at by means of systematic induction. The exquisite sense of beauty, and the high culture of art of the ancients, seemed, in fact, to have been wholly ignored by the prosaic Bacon, as it is by the realists of the present age.

His method itself, likewise, and still more that which by virtue of this method he accomplished, in the way of observation and experiment, are open to many objections. He tells us that he is about to wed the human intellect to nature, and on this announcement we look to see a joyful marriage and a union of love. But, instead of this, he presents us with a slow and wearisome plan of a siege, for the reduction of the stronghold of nature, whom he apparently desires us to starve into a surrender. For proof of this we need only turn to his "*History of the Winds*," written upon this plan, to say nothing of numerous kindred paragraphs, scattered throughout the second book of his "*Novum Organum*." He had evidently convinced himself that, with the aid of his method of induction, men could as intelligently and surely advance to the accomplishment of their aims, in the subjection of nature, as an able general predicts, to a certainty, that a fortress, to which he has laid siege, will surrender within a given time. If earlier observers, without such method, had made any progress in the investigation of nature, this, according to Bacon, should be ascribed to accident. "But this method makes us independent of accident, for it is all-comprehending and infallible. Nay, it is a way in which the blind can not err, a way too which places the man of humble capacity on a level with the genius."

These words appear addressed to us by Pestalozzi and the Pestalozzians. But such a view is derogatory to the gifts which God has lavished upon his chosen children. What though Bacon, by the use of his method, has built a solid waggon track to Helicon? The soaring intellects of a Kepler and a Galileo need no such beaten course; they are already upon the mountain-top, before the waggoners are ready to set forth.

This *anti-genial* element of the Baconian method Goethe has treated with a well-merited severity. When a man of fertile imagin-

ation and keen insight fixes his attention upon one important fact, seizes the law revealed therein, and holds fast that law, the results that he brings to pass are more far-reaching in their scope and influence, than when an adust and hackneyed plodder, wearys himself through long years in a methodical heaping together of myriads of isolated and less important facts, without once detecting the character and essence of the simplest of them all. For consider how truth flashed in upon the mind of Galileo, while watching the vibrations of a pendant chandelier, "a striking proof," says Goethe, "that for the man of genius, one fact is better than a thousand." For, according to him, in scientific researches every thing depends on what may be styled the "aperçu," or the instantaneous, intuitive recognition of the principle that underlies a given phenomenon.

But some one will ask, "do you then reject Bacon's method of induction in all its particulars?" By no means. It is only this idea of an equalizing scale applied to the mind, and his view that there is no other road to knowledge than the one that *he* has marked out, that merit our reproof.

In fact, Bacon himself, with a most happy inconsistency, often employs expressions that disarm all attack. For instance, take the following: "When a man brings to the contemplation of nature an open sense and a mind that is unentangled by the prejudices of tradition, he needs no such method." The favorites of fortune, the miracle-workers, as Luther calls them, are gifted with this unclouded vision; to this class Goethe himself belonged. With a lively sensibility, a refined organism, and a passionate love for nature, he needed not that any should say to him, 'open thine eyes and look around thee.' To him, the author of the lines,

> "Nature is good and kind
> Who clasps me to her breast,"

a marriage between the soul and the outward world was already a settled fact. "They that are whole need not a physician." But these miracle-workers are, alas, too rare; and most men must make use of a method which shall stimulate their sluggish spirits into life and energy.

As it regards the manner in which Bacon illustrated his method, as in the "*History of the Winds*," so severely commented upon by Goethe, he should be judged, in a measure, by the general tone of natural science in his own age. To Goethe's eloquent apology for "aperçus" or intuitive perceptions, Bacon might have replied, "your principles underlying phenomena, are what I have denominated 'forms,' which I nevertheless can not unveil by means of a single

fact taken symbolically, but only by induction, by a comparison of many facts, representing the varied shapes of one and the same Proteus."

In short, despite the objectionable manner in which Bacon, here and there, endeavored, in the concrete, to maintain, realize, and prove the deep and solid foundation-principles which he advanced, the truth of those principles remains yet unassailed; and, like a vital germ, they have grown, and are bearing fruit even to the present day. Bacon originated no school, but something greater and wider in its scope. He was the founder of the direct mode of questioning nature, a mode open alike to all, whatever their talent or abilities. He was, as we have before intimated, the creator of the practical experimentalism of the present day, which explores the world for material to work up into manufactured fabrics, and to him may be ascribed the present prevailing tendency, of the English nation especially, to utilitarianism, to that perfect subjection of nature, by the aid of science, that will lead men finally to a true rational magic.

* * * * * * *

I have now endeavored to present a brief abstract of Bacon's philosophy. I have also occasionally adverted to the influence which it has exerted upon mental culture, and, as a consequence, upon methods of instruction; an influence which, at the distance of two centuries, is still in the ascendant. But there are also many passages in the "*De augmentis scientiarum*" which have a direct bearing upon education. Of this nature is the second chapter of the Sixth Book, in which he treats of "prudentia traditiva," or knowledge delivered, and characterizes various methods of teaching. He gives the preference to the *genetic method*, where the teacher "transplants knowledge into the scholar's mind, as it grew in his own." Whatever is imparted in this way, will take root, flourish, and bear fruit. He commends aphorisms: "For representing a knowledge broken, they do invite men to inquire farther; whereas systems, carrying a show of a total, do secure men as if they were at farthest." "Methods should vary according to the subject to be taught, for in knowledge itself there is great diversity."

In one place he treats most strenuously and earnestly of the importance of education. "A gardener," he says, "takes more pains with the young than with the full-grown plant; and men commonly find it needful, in any undertaking, to begin well. We give scarce a thought to our teachers, and care little for what they may be, and yet we are forever complaining, because rulers are rigid in the matter

of laws and penalties, but indifferent to the right training of the young.

To this Bacon adds a panegyric upon the schools of the Jesuits, by way of introduction to another paragraph on education. It is as follows:—

"As it regards teaching, this is the sum of all direction: take example by the schools of the Jesuits; for better do not exist. However, I will add, according to my wont, a few scattered thoughts on this head. Collegiate training for young men and boys excels, in my opinion, that of the family or of the school. For not only are greater incentives to action to be found at colleges, but there too the young have ever before their eyes men of dignified bearing and superior scholarship, who command their respect, and whom they grow insensibly to imitate. In short, there is hardly a particular in which colleges do not excel. In regard to the course and order of instruction, my chief counsel would be to avoid all digests and epitomes of learning; for they are a species of imposture, giving men the means to make a show of learning, who have it not. Moreover, the natural bent of individual minds should be so far encouraged, that a scholar, who shall learn all that is required of him, may be allowed time in which to pursue a favorite study. And furthermore, it is worth while to consider, and I think this point has not hitherto received the attention that its importance demands, that there are two distinct modes of training the mind to a free and appropriate use of its faculties. The one begins with the easiest, and so proceeds to the more difficult; the other, at the outset, presses the pupil with the more difficult tasks, and, after he has mastered these, turns him to pleasanter and easier ones: for it is one method to practice swimming with bladders, and another to practice dancing with heavy shoes. It is beyond all estimate, how much a judicious blending of these two methods will profit both the mental and the bodily powers. And so to select and assign topics of instruction, as to adapt them to the individual capabilities of the pupils,—this, too, requires a special experience and judgment. A close observation and an accurate knowledge of the different natures of pupils is due from teachers to the parents of these pupils, that they may choose an occupation in life for their sons accordingly. And note further, that not only does every one make more rapid progress in those studies to which his nature inclines him, but again that a natural disinclination, in whatever direction, may be overcome by the help of special studies. For instance, if a boy has a light, inattentive, and inconstant spirit, so that he is easily diverted, and his attention can not be readily fixed, he

will find advantage in the mathematics, in which a demonstration must be commenced anew whenever the thoughts wander even for a moment.

These cautions respecting mental training may not, at the first glance, appear to abound either in weight or wisdom; but, acted on, they are both fruitful and efficient. For as the wronging or cherishing of seeds or young plants is that, that is most important to their thriving, and as it was noted that the first six kings, being in truth as tutors of the state of Rome in the infancy thereof, was the principal cause of the eminent greatness of that state which followed; so the culture and manurance of minds in youth hath such a forcible, though unseen operation, as hardly any length of time or contention of labor can countervail it afterward. And it is not amiss to observe how small and mean faculties, gotten by education, yet when they fall into great men or great matters, do work great and important effects, whereof I will give a notable example. And the rather, as I find that the Jesuits also have not neglected the cultivation of these lesser graces of the scholar, in which, as it seems to me, they have shown sound judgment. I speak of that art which, followed for a livelihood, brings reproach, but, used in education, does the best of service,—I mean the acting of plays. This strengthens the memory, gives volume to the voice, power to the expression, ease to the bearing, grace to the gestures, and imparts a wonderful degree of self-confidence, thus thoroughly fitting young men for the demands of a public career. Tacitus relates that a certain stage-player, Vibulenus, by his faculty of playing, put the Panonnian armies into an extreme tumult and combustion. For there arising a mutiny among them, upon the death of Augustus Cæsar, Blæsus, the lieutenant, had committed some mutineers, which were suddenly rescued; whereupon Vibulenus got to be heard speak, which he did in this manner: 'These poor innocent wretches, appointed to cruel death, you have restored to behold the light; but who shall restore my brother to me, or life unto my brother, that was sent hither in message from the legions of Germany, to treat of the common cause? And he hath murdered him this last night by some of his fencers and ruffians, that he hath about him for his executioners upon soldiers. Answer, Blæsus, what is done with his body? The mortalest enemies do not deny burial; when I have performed my last duties to the corpse, with kisses, with tears, command me to be slain besides him, so that these my fellows, for our good meaning, and our true hearts to the legions, may have leave to bury us.' With which speech he put the army into an infinite fury and uproar; whereas truth was, he had no

brother, neither was there any such matter, but he played it merely as if he had been upon the stage."

It should be understood, however, that this passage on education is isolated, and by no means in connection with the general philosophical system of Bacon. It is surprising that the man who said, "It is no less true in this human kingdom of knowledge than in God's kingdom of heaven, that no man shall enter into it, except he become first as a little child," did not adhere to this sentiment, and carry it into all his speculations. When he taught that "men must abjure all traditional and inherited views and notions, so that with an open and unworn sense they might come to the observation of nature," why did he not apply his doctrine to that class, who know nothing by tradition, and who have nothing to unlearn,—I mean to children? Why did he not build anew the science of education upon the solid basis of realism? Instead of this, we find nothing but an ill-assorted farrago of good, bad, and indifferent. I have already expressed my disapproval of the pernicious influence of the educational tenets of the Jesuits, which Bacon so highly recommends, especially their *primum mobile*, the principle of emulation. Much might be urged also against some of the features of seminaries and colleges. His advocacy of theatrical representations in schools is, singularly enough, supported by the above example from Tacitus; which, more nearly considered, is truly hideous, an example of a stage-player, who, in the reign of Tiberius, with the aid of surpassing eloquence, palmed off upon the Pannonian legions a wholesale lie, and so instigated them to a rebellion against their general. But he forgot to add, that Drusus most fitly recompensed the ill-omened orator for his all too potent speech with the loss of his head. Why did not Bacon, keen as he ordinarily proved himself in argument, rather use this example to condemn theatrical representations in schools, inasmuch as these representations very often pass from a mimic jest into a too serious familiarity with lies and deceit?

Meanwhile some of his views in the passage above quoted, as, against over hasty methods of imparting instruction, in favor of a judicious interchange between the easier and the more difficult branches of learning, and the like, are timely and encouraging.

But, though these doctrines insure their own reception, we ought not too hastily to conclude that Bacon's highest claims in the cause of education are based upon them. These claims proceed much rather from the fact, which I can not too often repeat, that he was the first to break out of the beaten track, and to address scholars, who lived and moved in the languages and writings of antiquity, yea, who

were mostly echoes of the old Greeks and Romans, and who had no higher ambition than to be so,—to address them in such language as the following: "Be not wrapped up in the past, there is an actual present lying all about you; look up and behold it in its grandeur. Turn away from the broken cisterns of traditional science, and quaff the pure waters that flow sparkling and fresh forever from the unfathomable fountain of the creation. Go to nature and listen to her many voices, consider her ways and learn her doings; so shall you bend her to your will. For knowledge is power."

These doctrines have exerted an incalculable influence, especially in England, where theoretical and practical natural philosophy are, in the manner indicated by Bacon, united, and where this union has been marvelously fruitful of results. Their influence, moreover, may be traced, at quite an early period, in the department of education. The first teacher who imbibed the views of Bacon was, most probably, Ratich. But we have the distinct acknowledgment from that most eminent of the teachers of the seventeenth century, Comenius, of his indebtedness to Bacon. In the year 1633, he brought out a work upon natural philosophy; and, in the preface to this work, he adverted to his own obligations to Bacon. He here called the "*Instauratio Magna*" "a most admirable book. I regard it as the most brilliant of the philosophical works of the present century. I am disappointed, however, that the keen-eyed Verulam, after furnishing us with the true key to nature, has not himself opened her mysteries, but has only showed us by a few examples how they may be opened, and so left the task to future generations." In another paragraph he says: "Do not we, as well as the ancients, live in the garden of nature? Why then should not we, as well as they, use our eyes and our ears? Why must we learn the works of nature from any other teachers than these, our senses? Why, I ask, shall we not throw aside our dead books, and read in that living volume around us, in which vastly more is contained than it is possible for any man to record; especially too that the pleasure and the profit to come from its perusal are both so much the greater? In experience too, we are so many centuries in advance of Aristotle."

With this eminent example of Bacon's influence in the department of instruction, I shall close. Were I to cite additional instances, I should be compelled to anticipate much of the following history. In this the connection of our modern realists, their schools of industry, polytechnic schools, and the like, with the doctrines of Bacon, will be so abundantly and so repeatedly demonstrated, as to justify me in styling him the founder and originator of modern realism, and of realistic principles of instruction.

To this admirable exposition of Lord Bacon's contribution to the science of education, in his inductive method of investigating nature, we append, from the "*Essays Civil and Moral*," Essay XXXIX, entitled "*Of Custom and Education*," with explanatory notes and annotations, by Archbishop Whately, contained in the edition lately (1858,) issued by C. S. Francis & Co., New York.

ESSAY XXXIX. OF CUSTOM AND EDUCATION.

Men's thoughts are much according to their inclination; their discourse and speeches according to their learning and infused opinions; but their deeds are after[1] as[2] they have been accustomed: and therefore, as Machiavel well noteth (though in an evil-favored instance,) there is no trusting to the force of nature, nor to the bravery of words, except it be corroborate[3] by custom. His instance is, that for the achieving of a desperate conspiracy, a man should not rest upon the fierceness of any man's nature, or his resolute undertakings, but take such a one as hath had his hands formerly in blood: but Machiavel knew not of a friar Clement, nor a Ravillac, nor a Jaureguy, nor a Baltazar Gerard; yet his rule holdeth still, that nature, nor the engagement of words, are not[4] so forcible as custom. Only superstition is now so well advanced, that men of the first blood are as firm as butchers by occupation; and votary[5] resolution is made equipollent to custom, even in matter of blood. In other things, the predominancy of custom is every where visible, insomuch as a man would wonder to hear men profess, protest, engage, give great words, and then do just as they have done before, as if they were dead images and engines, moved only by the wheels of custom. We see also the reign or tyranny of custom, what it is. The Indians (I mean the sect of their wise men,) lay themselves quietly upon a stack of wood, and so sacrifice themselves by fire: nay, the wives strive to be burned with the corpse of their husbands. The lads of Sparta,[6] of ancient time, were wont to be scourged upon the altar of Diana, without so much as quecking.[7] I remember, in the beginning of Queen Elizabeth's time of England, an Irish rebel condemned, put

1. After. *According to.* "That ye seek not *after* your own heart."—*Num.*, xv: 39. "He who was of the bondwoman was born *after* the flesh."—*Gal.*, iv: 23. "Deal not with us *after* our sins"—*Litany.*

2. As. *That.* See page 23.

3. Corroborate. *Corroborated; strengthened; made firm.*
"His heart is *corroborate.*"—*Shakespeare.*

4. Nor—Are not. This double negative is used frequently by old writers.
"*Nor* to no Roman else."—*Shakespeare.*
"Another sort there be, that will
Be talking of the fairies still,
Nor never can they have their fill."—*Drayton.*

5. Votary. *Consecrated by a vow.*

6. Cic. *Tuscul. Dial.*, ii: 14.

7. Quech (properly quich.) *To move; to stir.*
"Underre her feet, there as she sate,
An huge great lyon laye, that mote appalle
An hardy courage; like captived thrall
With a strong iron chain and collar bounde—
Not once he could nor move nor *quich.*"—*Spenser.*

up a petition to the deputy that he might be hanged in a withe,[1] and not in a halter, because it had been so used with former rebels. There be monks in Russia, for penance, that will sit a whole night in a vessel of water, till they be engaged with hard ice.

Many examples may be put of the force of custom, both upon mind and body; therefore, since custom is the principal magistrate of man's life, let men by all means endeavor to obtain good customs. Certainly, custom is most perfect when it beginneth in young years: this we call education, which is, in effect, but an early custom. So we see in languages, the tone is more pliant to all expressions and sounds, the joints are more supple to all feats of activity and motions, in youth, than afterward; for it is true, the late learners can not so well take up the ply, except it be in some minds, that have not suffered themselves to fix, but have kept themselves open and prepared to receive continual amendment, which is exceeding rare; but if the force of custom, simple and separate, be great, the force of custom, copulate, and conjoined, and collegiate, is far greater; for there example teacheth, company comforteth,[2] emulation quickeneth, glory raiseth; so is in such places the force of custom is in his[3] exaltation. Certainly, the great multiplication[4] of virtues upon human nature resteth upon societies well ordained and disciplined; for commonwealths and good governments do nourish virtue grown, but do not much mend the seeds: but the misery is, that the most effectual means are now applied to the ends least to be desired.

ANNOTATIONS.

"Men's thoughts are much according to their inclinations: their discourse and speeches according to their learning and infused opinions, but their deeds are after as they have been accustomed."

This remark, like many others, Bacon has condensed in Latin into the very brief and pithy apophthegm which I have given in the "*Antitheta on Nature in Men.*" "Cogitamus secundum naturam; loquimur secundum præcepta; sed agimus secundum consuetudinem." Of course, Bacon did not mean his words to be taken literally in their utmost extent, and without any exception or modification; as if natural disposition and instruction had nothing to do with conduct. And, of course, he could not mean any thing so self-contradictory as to say that *all* action is the result of custom: for it is plain that, in the first instance, it must be *by* actions that a custom is formed.

But he uses a strong expression, in order to impress it on our mind that, for practice, custom is the most essential thing, and that it will often overbear both the original disposition, and the precepts which have been learnt: that whatever a man may inwardly think, and (with perfect sincerity) say, you can not fully depend on his conduct till you know how he has been *accustomed* to act. For, continued

1. Withs *Twigs, or bands of twigs* "If they bind me with seven green *withs*, then shall I be weak."—*Judges*, xvi: 7

2. Comfort. *To strengthen as an auxiliary; to help.* (The meaning of the original Latin word, *Conforto.*) "Now we exhort you brethren, *comfort* the feeble-minded."—1 *Thess.*, v: 14.

3. His. *Its.* "But God giveth it a body as it hath pleased Him, and to every seed *his* own body."—1 *Cor.*, xv: 38.

4. Multiplication upon. "Increase and *multiply upon* us thy mercy."—*Collect for the 4th Sunday after Trinity.*

action is like a continued stream of water, which *wears* for itself a *channel*, that it will not easily be turned from. The bed which the current had gradually scooped at first, afterward confines it.

Bacon is far from meaning, I conceive, when he says that "men speak as they have learned," to limit himself to the case of *insincere* professions; but to point out how much easier it is to learn to repeat a lesson correctly, than to bring it into practice, when custom is opposed to it.

This is the doctrine of one whom Bacon did not certainly regard with any undue veneration—Aristotle; who, in his "*Ethics*," dwells earnestly on the importance of being early accustomed to right practice, with a view to the formation of virtuous habits. And he derives the word "ethics" from a Greek word signifying custom; even as the word "morality" is derived from the corresponding Latin word "mos."

It is to be observed that, at the present day, it is common to use the words "custom" and "habit" as synonymous; and often to employ the latter where Bacon would have used the former. But, strictly speaking, they denote respectively the *cause* and the effect. Repeated acts constitute the "custom;" and the "habit" is the condition of mind or body thence resulting. For instance, a man who has been *accustomed* to rise at a certain hour, will have acquired the *habit* of waking and being ready to rise as soon as that hour arrives. And one who has made it his *custom* to drink drams, will have fallen into the *habit* of craving for that stimulus, and of yielding to that craving; and so of the rest.

Those are, then, in error who disparage (as Mrs. Hannah More does) all practice that does not spring from a formed habit. For instance, they censure those who employ children as almoners, handing them money or other things to relieve the poor with. For, say they, no one can *give* what is not his own; there is no charity, unless you part with something that you might have kept, and which it is a self-denial to part with. The answer is, that if the child does this readily and gladly, he has *already learnt* the virtue of charity; but if it is a *painful* self-denial which you urge him to, as a duty, you are creating an association of charity with pain. On the contrary, if you accustom him to the pleasure of seeing distress relieved, and of being the instrument of giving pleasure, and doing good, the desire of this gratification will lead him, afterward, to part with something of his own, rather than forego it. Thus it is—to use Horace's comparison—that the young hound is trained for the chase in the woods, from the time that he barks at the deer-skin in the hall.[1]

The precept is very good, to begin with swimming with corks.

There is an error somewhat akin to the one I have been combating, which may be worth noticing here. Declamations are current in the present day against the iniquity of giving a bias to the minds of young persons, by teaching them our own interpretation of the Sacred Volume, instead of leaving them to investigate for themselves; that is, against endeavoring to place them in the same situation with those to whom those very Scriptures were written; instead of leaving them to struggle with difficulties which the Scriptures nowhere contemplate or provide against. The maintainers of such a principle would do well to consider, whether it would not, if consistently pursued, prove too much. Do you not, it might be asked, bias the minds of children, by putting into their hands the Scriptures them-

1. . . . . "Venaticus, ex quo
Tempore cervinam pellam latravit in aula,
Militat in silvis catulus."—Book *Horace*, l. ep. 2, l. 65.

selves, as the infallible word of God? If you are convinced that they are so, you must be sure that they will stand the test of unprejudiced inquiry. Are you not, at least, bound in fairness to teach them, at the same time, the systems of ancient mythology, the doctrines of the Koran, and those of modern philosophers, that they may freely choose amongst all? Let any one who is disposed to deride the absurdity of such a proposal consider whether there is any objection to it, which would not equally lie against the exclusion of systematic religious instruction, or, indeed, systematic training in any science or art. It is urged, however, that since a man must *wish* to find the system true in which he has been *trained*, his judgment must be unduly biased by that wish. It would follow, from this principle, that no physician should be trusted, who is not utterly indifferent whether his patient recovers or dies, and who is not wholly free from any favorable hope from the mode of treatment pursued; since, else his mind must be unfairly influenced by his wishes!

"*The predominancy of custom is every where visible; insomuch as a man would wonder to hear men profess, protest, engage, give great words, and then do just as they have done before; as if they were dead images and engines, moved only by the wheels of custom.*"

This "predominancy of custom" is remarkably exemplified in the case of soldiers who have long been habituated to obey, as if by a mechanical impulse, the word of command.

It happened, in the case of a contemplated insurrection in a certain part of the British Empire, that the plotters of it sought to tamper with the soldiers who were likely to be called out against them; and, for this purpose, frequented the public houses to which the soldiers resorted, and drew them into conversation. Reports of these attempts reached the officers; who, however, found that so little impression was made, that they did not think it needful to take any notice of them. On one occasion it appeared that a sergeant of a Scotch regiment was so far talked over as to feel and express great sympathy with the agitators, on account of their alledged grievances, as laid before him by the seducer. "Weel, now, I did na ken that; indeed, that seems unco hard; I can na wonder that ye should complain o' that," &c., &c.

The other, seeking to follow up his blow, then said: "I suppose now such honest fellows as you, if you were to be called out against us, when we were driven to rise in a good cause, would never have the heart to *fire* on poor fellows who were only seeking liberty and justice." The sergeant replied (just as he was reaching down his cap and belt, to return to barracks,) "*I'd just na advise ye to try!*"

He felt conscious—misled as he had been respecting the justice of the cause—that, whatever might be his private opinions and inward feelings, if the word of command were given to "make ready, present, fire," he should instinctively obey it.

And this is very much the case with any one who has been long drilled in the ranks of a *party*. Whatever may be his natural disposition—whatever may be the judgment his unbiased understanding dictates on any point—whatever he may inwardly feel, and may (with perfect sincerity) have said—when you come to action, it is likely that the habit of going along with his party will prevail. And the more *general and indefinite* the purpose for which the party, or society (or by whatever name it may be called) is framed, and the less *distinctly specified* are its objects, the more will its members be, usually, under the control and direction of its leaders.

I was once conversing with an intelligent and liberal-minded man, who was expressing his strong disapprobation of some late decisions and proceedings of the leading persons of the society he belonged to, and assuring me that the greater part of the subordinates regarded them as wrong and unjustifiable. "But," said I, "they will nevertheless, I suppose, *comply*, and act as they are required?" "Oh, yes, they *must* do that!"

Of course, there are many various *degrees* of partisanship, as there are also different degrees of custom in all other things; and it is not meant that all who are in any degree connected with any party must be equally devoted adherents of it. But I am speaking of the tendency of party-spirit, and describing a party-man *so far forth* as he is such. And persons of much experience in human affairs lay it down accordingly as a maxim, that you should be very cautious how you fully *trust* a party-man, however sound his own judgment, and however pure the principles on which he acts, when left to himself. A sensible and upright man, who keeps himself quite unconnected with party, may be *calculated* on as likely to *act* on the views which you have found him to take on each point. In some things, perhaps, you find him to differ from you; in others to agree; but when you have learnt what his sentiments are, you know in each case what to *expect*. But it is not so with one who is connected with, and consequently controlled by, a party. In proportion as he is so, he is not fully his own master; and in some instances you will probably find him take you quite by surprise, by assenting to some course quite at variance with the sentiments which you have heard him express—probably with perfect sincerity—as his own. When it comes to action, a formed habit of following the party will be likely to prevail over every thing. At least, "*I'd just na advise ye to try!*"

It is important to keep in mind that—as is evident from what has been said just above—habits are formed, not at one stroke, but gradually and insensibly; so that, unless vigilant care be employed, a great change may come over the character, without our being conscious of any. For, as Dr. Johnson has well expressed it, "The diminutive chains of habit are seldom heavy enough to be felt, till they are too strong to be broken."

And this is often strongly exemplified in the case just adverted to—that of party-spirit. It is not often that a man, all at once, resolves to join himself to a party; but he is drawn in by little and little. Party is like one of those perilous whirlpools sometimes met with at sea. When a vessel reaches the outer edge of one of them, the current moves so slowly, and with so little of a curve, that the mariners may be unconscious of moving in any curve at all, or even of any motion whatever. But each circuit of the spiral increases the velocity, and gradually increases the curve, and brings the vessel nearer to the center. And perhaps this rapid motion, and the direction of it, are for the first time perceived, when the force of the current has become irresistible.

"It is true that a man *may*, if he will, withdraw from, and disown, a party which he had formerly belonged to. But this is a step which requires no small degree of moral courage. And not only are we strongly tempted to shrink from taking such a step, but also our dread of doing so is likely rather to mislead our reason than to overpower it. A man will *wish* to think it justifiable to adhere to the party; and this wish is likely to bias his judgment, rather than to prevail on him to act contrary to his judgment. For, we know how much the judgment of men is likely to be *biased*, as well as how much they are tempted to acquiesce in something *against* their judgment, when earnestly pressed by the majority of

those who are acting with them—whom they look up to—whose approbation encourages them—and whose censure they can not but dread.

"Some doctrine, suppose, is promulgated, or measure proposed, or mode of procedure commenced, which some members of a party do not, in their unbiased judgment, approve. But any one of them is disposed, first to *wish*, then to *hope*, and lastly to *believe*, that those are in the right whom he would be sorry to think wrong. And again, in any case where his judgment may still be unchanged, he may feel that it is but a *small* concession he is called on to make, and that there are *great* benefits to set against it; and that, after all, he is perhaps called on merely to *acquiesce silently* in what he does not quite approve; and he is loth to incur censure, as lukewarm in the good cause—as presumptuous—as unfriendly toward those who are acting with him. To be "a breaker up of the Club" (ἑταιριας διαλυτης) was a reproach, the dread of which, we learn from the great historian of Greece, carried much weight with it in the transactions of the party warfare he is describing. And we may expect the like in all similar cases.

"One may sometimes hear a person say, in so many words—though far oftener in his conduct—'It is true, I do not altogether approve of such and such a step; but it is insisted on as essential, by those who are acting with us; and if we were to hold out against it, we should lose their co-operation; which would be a most serious evil. There is nothing to be done, therefore, but to comply.'"

"*Certainly custom is most perfect when it beginneth in young years: this we call education, which is, in effect, but an early custom.*"

Education may be compared to the grafting of a tree. Every gardener knows that the *younger* the wilding-stock is that is to be grafted, the easier and the more effectual is the operation; because, then, one scion put on just above the root, will become the main stem of the tree, and all the branches it puts forth will be of the right sort. When, on the other hand, a tree is to be grafted at a considerable age (which may be very successfully done,) you have to put on twenty or thirty grafts on the several branches; and afterward you will have to be watching from time to time for the wilding-shoots, which the stock will be putting forth, and prunning them off. And even so one, whose character is to be *reformed* at mature age, will find it necessary, not merely to implant a right principle once for all, but also to bestow a distinct attention on the correction of this, that, and the other bad habit.

It is wonderful that so many persons should confound together being accustomed to certain *objects*, and accustomed to a certain mode of *acting*. Aristotle, on the contrary, justly remarks that opposite habits are formed by means of the same things (εκ των αυτων, και δια των αυτων,) treated in opposite ways; as, for instance, humanity and inhumanity—by being accustomed to the view of suffering, with and without the effort to relieve it. Of two persons who have been accustomed to the sight of much human misery, one, who has been used to pass it by without any effort to relieve it, will become careless and hardened to such spectacles; while another, who has been in the practice of *relieving* sufferers, will acquire a strong habit of endeavoring to afford relief. These two persons will both have been accustomed to the same *objects*, but will have acquired opposite *habits*, from being accustomed to *act* in opposite ways.

Suppose that there is in your neighborhood a loud bell, that is rung very early every morning, to call the laborers in some great manufactory. At first, and for some time, your rest will be broken by it; but, if you accustom yourself to lie still, and try to compose yourself, you will become, in a few days, so *used*

to it, that it will not even wake you. But any one who makes a point of rising immediately at the call, will become so *used to it* in the *opposite* way, that the sound will never fail to rouse him from the deepest sleep. Both will have been accustomed to the same bell, but will have formed opposite habits from their contrary modes of action.

But it must not be forgotten that education resembles the grafting of a tree in this point, also, that there must be some affinity between the stock and the graft, though a very important practical difference may exist; for example, between a worthless crab, and a fine apple. Even so, the new nature, as it may be called, superinduced by education, must always retain some relation to the original one, though differing in most important points. You can not, by any kind of artificial training, make *any* thing of *any* one, and obliterate all trace of the natural character. Those who hold that this *is* possible, and attempt to effect it, resemble Virgil, who (whether in ignorance or, as some think, by way of "poetical license,") talks of grafting an oak on an elm: "glandesque sues fregere sub ulmis."

One of Dr. Johnson's paradoxes, more popular in his time than now, but far from being now exploded, was, that a given amount of ability may be turned in any direction, "even as a man may walk this way or that." And so he can; because walking is the action for which the legs are fitted; but, though he may use his eyes for looking at this object or that, he can not hear with his eyes, or see with his ears. And the eyes and ears are not more different than, for instance, the poetical faculty, and the mathematical. "Oh, but if Milton had turned his *mind* to mathematics, and if Newton had turned his mind to poetry; the former might have been the great mathematician, and the latter the great poet." This is open to the proverbial reply, "If my aunt had been a man, she would have been my uncle." For, the supposition implied in these *ifs* is, that Milton and Newton should have been quite different characters from what they were.

" . . . *Minds that have not suffered themselves to fix, but have kept themselves open and prepared to receive continual amendment, which is exceeding rare.*"

And as admirable as it is rare. Such minds may indeed print their opinions, but do not stereotype them. Nor does the self-distrust, the perpetual care, the diligent watchfulness, the openness to conviction, the exercise of which is implied in Bacon's description, necessarily involve a state of painful and unceasing doubt. For, in proportion as a man is watchfully and prayerfully on his guard against the unseen current of passions and predjudices, which is ever tending to drive him out of the right course, in the same degree he will have reason for cherishing an humble hope that He, the Spirit of Truth, is, and will be, with him, to enlighten his understanding, to guide his conduct, and to lead him onward to that state in which Faith shall be succeeded by sight, and hope by enjoyment.

"*The force of custom, copulate, and conjoined, and collegiate, is far greater.*"

For this reason it is, that what is said or done by very inferior persons, is the best sign of what is *commonly* said or done in the place and time in which they live. A man of resolute character, and of an original turn of thought, being more likely to resist this force of "copulate and collegiate custom," does not furnish so good a sign of what are the *prevailing* opinions and customs. Hence the proverb:—

"A straw best shows
How the wind blows."

A bar of heavy metal would not be perceptibly influenced by the wind.

I wish I could feel justified in concluding this head without saying any thing of Bacon's own character; without holding him up as himself a lamentable example of practice at variance with good sentiments, and sound judgment, and right precepts. He thought well, and he spoke well; but he had *accustomed* himself to act very far from well. And justice requires that he should be held up as a warning beacon to teach all men an important lesson; to afford them a sad proof that no intellectual power—no extent of learning—not even the most pure and exalted moral sentiments, confined to theory, will supply the want of a diligent and watchful conformity in practice to christian principle. All the attempts that have been made to vindicate or palliate Bacon's moral conduct, tend only to lower, and to lower very much, the standard of virtue. He appears but too plainly to have been worldly, ambitious, covetous, base, selfish, and unscrupulous.[1] And it is remarkable that the Mammon which he served proved but a faithless master in the end. He reached the highest pinnacle, indeed, to which his ambition had aimed; but he died impoverished, degraded, despised, and broken-hearted. His example, therefore, is far from being at all seductive.

But let no one, thereupon, undervalue or neglect the lessons of wisdom which his writings may supply, and which we may, through divine grace, turn to better account than he did himself. It would be absurd to infer that, because Bacon was a great philosopher, and far from a good man, therefore you will be the better man for keeping clear of his philosophy. His intellectual superiority was no more the cause of his moral failures, than Solomon's wisdom was of his. You may be as faulty a character as either of them was, without possessing a particle of their wisdom, and without seeking to gain instruction from it. The intellectual light which they enjoyed did not, indeed, keep them in the right path; but you will not be the more likely to walk in it, if you quench any light that is afforded you.

The Canaanites of old, we should remember, dwelt in "a good land, flowing with milk and honey," though they worshiped not the true God, but served abominable demons, with sacrifices of the produce of their soil, and even with the blood of their children. But the Israelites were invited to go in, and take possession of "well-stored houses that they builded not, and wells which they digged not;" and they "took the labors of the people in possession:" only, they were warned to beware, lest, in their prosperity and wealth, they should "forget the Lord their God," and to offer to Him the first fruits of their land.

Neglect not, then, any of the advantages of intellectual cultivation, which God's providence has placed within your reach; nor "think scorn of that pleasant land," and prefer wandering by choice in the barren wilderness of ignorance; but let the intellect, which God has endowed you with, be cultivated as a servant to *Him*, and then it will be, not a master, but an useful servant, to *you*.

1. This censure of Bacon has actually been complained of as undeserved; not on the ground that his *conduct* was any better than it is but too well known to have been, but on the ground that his *writings* contain excellent views of Gospel truth!

This is exactly the doctrine of the ancient Gnostics; who held that their (so-called) *knowledge* [Gnosis] of the Gospel would save them, though leading a vicious life.

But, when instances of such teaching in our own days are adduced (as unhappily may be done to a great extent,) some persons—including some who are themselves of blameless life—resolutely shut their ears to evidence, and will not be brought to perceive, or at least to acknowledge, that any such thing as Gnosticism exists among us, or that we are in danger of antinomian doctrine.

So strong is the force of party!

IV. THE REAL SCHOOLS OF GERMANY.

[Translated from the German of Karl von Raumer for this Journal.]

During the seventeenth century, pedagogical realism gained more and more ground in the schools of learning, as is shown by the introduction of the school-books of Comenius. These were brought into the gymnasium at Hersfield, in 1649. In the Dantzic Gymnasium, according to the plan of study for 1653, the *Vestibulum* and *Janua* of Comenius were to be read; in those of Stargard and Nuremberg, the *Orbis Pictus.*

In the use of these books, however, the thing sought for appears to have been a *copia vocabulorum*, with especial regard to the speaking of Latin. The pictures were used rather as a mnemonic help for fixing the words in the memory, than according to the idea of Comenius, as means of becoming acquainted with the things themselves.

The things, however, imperceptibly asserted their proper place. Feuerlein remarks, that complaint had been made of the want of a good vocabulary or *nomenclator;* and about the *Orbis Sensualium* of Comenius, which up to that time had been almost the only work of the kind. This contained the Latin of tailors, weavers, shoemakers, cooks, and butlers, unlatin phrases and barbarisms; and, on the other hand, lacked the most necessary words, particles, &c.* The *Libellus memorialis* of Cellarius was introduced in the place of the *Orbis Pictus*, to remedy this defect. But this school-book, which was of printed matter only, gave no better satisfaction; men had become used to the pictures of Comenius, and to his world of real things. Thus, Feuerlein says: "men might set about some wood-cuts or copper-plates, in which the several things which youth were learning might at least be placed *in effigie* before their eyes, and under each, what they are, or for what they are used, might be written; of which they might memorize the Latin names, and thus might fix words in their memories in relation to which they did not know what the thing is, or what the word means. * * * Besides, it would not be a

* Feuerlein relates that when a scholar asked Conrector Manner, "Master, what is the Latin for Kugel-Höpflein?" (a sort of cake,) he answered, "You fool, do you suppose that Cicero ever ate a Kugel-Höpflein?" That is, where is the use of learning Latin words which do not appear in the classics?

bad plan," he continues, "to take some of the boys, from time to time, upon walks into the fields and gardens, to forges, saw mills, paper mills, &c., or to workshops of all kinds; to show them the tools, and tell them what are their names, and what is done with them; and then to ask them what are the Latin names of this or that, which they see *in substantia* before their eyes; or to tell them to them. This would not only impress the words much better upon their memories, while they would not otherwise learn them without vexation, since they do not understand them in German, or know what the thing is; but also this knowledge would serve a good turn in every-day life; in which the educated man often appears so ignorant and ill-informed upon subjects which are always coming up in ordinary conversation."

Something of life was beginning to make itself felt all through the schools.

Although the *Orbis Pictus* was disused in the Nuremberg Gymnasium, the Vestibulum of Comenius was yet retained there in the two lowest classes. In the same direction was tending most of the realist instruction in mathematics, which is called, in the plan of study given by Feuerlein, *mathesis juvenilis*, and which passed through five classes.

Sturm's class-book,* which was used for this purpose, is largely furnished with copper-plates, and includes general mathematics, practical arithmetic, theoretical and practical geometry, (field surveying, measuring altitudes, and stereometry,) optics, military and civil architecture, cosmography, chronology, dialing, mechanics, and, last of all, chiromancy! The elements of these studies are contained upon seventy-nine folio pages. Feuerlein praises highly Sturm's mathematical method; one would think one was listening to a scholar of Pestalozzi. "In it," he says, "there is no learning by rote of the one-times-one, as is customary in the German schools, without understanding it; but they learn themselves to make it, and to fix their understanding on it with reason and good apprehension of it. Here is learned the διοτι, the basis of the rules, why they do so and so; in the German schools only the ὅτι is taught; how to proceed, without knowing the basis of the proceedings, the why. In the latter case the work would seem to be almost entirely one of memory, rather than of reason." He then goes on to praise it,—and this is what we have special regard to; that the boys "learn so skillfully to use the compasses, the square, the measuring-rod, &c., and that, after a few exercises, they learn, quickly and neatly, to estimate by the eye alone, the size of a table, a window, a room, a house, &c."

* The title is: "*Johannis Christophori Sturmii mathesis compendiaria sive tyrocinia mathematica.*" I have before me the sixth edition in folio, Coburg, 1714; edited by Sturm's son, Leonhard Christoph Sturm.

According to Sturm's preface to his book, it was introduced into various German gymnasiums.

Pastor Semler, of Halle, went still one step further.* In 1739, he published an account called "*Upon the Mathematical, Mechanical, and Agricultural Real School in the city of Halle*, approved and reopened by the royal Prussian government of the Duchy of Magdeburg, and the Berlin royal society of sciences."†

So far as I know, this is the first time that the name and the idea of the *real* school appear. Besides religious instruction, according to Semler, youth are to be instructed in knowledge which is useful and entirely indispensable in every-day life; and, in particular, all visible things are to be shown to them, whether in nature or by means of all manner of pictures. "A description of Rome in a book," he says, "gives the faintest notion of the city; a more lively one is given by an oral description, from one who has lived long in Rome; the liveliness of this impression is increased by copper-plates, paintings, or models; but to see the city with one's own eyes gives a most perfect knowledge. His rule has been, for forty years, *Non scholæ sed vitæ discendum*. In *real* life is needed a knowledge of weight, size, of the use of circles and lines, of the almanac, astronomy, and geography. There is also needed: "Knowledge of some physical things, such as metals, minerals, common stones, and precious stones, woods, colors, drawings, farming, gardening, book-keeping, something of anatomy and regimen, the most necessary parts of police regulations, the history of the country, from the Halle Chronicle and other authors; the map of all Germany, and those of the Duchy of Magdeburg, and of the cities and towns lying about Halle, which will be the subject of conversation very often in daily life; for this sort of knowledge is much more important than to know in what part of the world are Dublin, Astrakhan, and Adrianople."

We have here not only an enumeration of most of the real subjects which were afterward taught in the real schools, but also the fundamental principle appears here which was the leading one of Rousseau and Pestalozzi; that, first of all, that must be learned which is required by the immediate present, by daily life.

Among the professors at Halle, Semler mentions Chr. Thomasius, Cellarius, Hofmann the physician, and the philosopher Wolf, as those who approved his principles. In 1706, he presented his school pro-

* Christoph Semler, a Lutheran preacher, was born in Halle, in 1669; read lectures there; in 1697 became a magistrate, in 1699 inspector of the poor schools; was principal deacon of the church of St. Ulrich, and member of the Berlin Academy of Sciences. He died in 1740. Jöcher says, "He was a man of great science in mechanics and mathematics."

† This appeared in the "*Halle Advertiser*," from which it was taken for the "*Acta Historica Ecclesiastica*," (1740, Vol. XIX., p. 198.)

posals to the government of Magdeburg, which entered into them with approval. The Berlin society of sciences, being applied to by that government upon the subject, answered on the 15th of December, 1706; that provided schools were established for the training up of state and church officers, it would be well for such boys as now attend only the German schools, "to be instructed in an actual mechanical school, so that their understandings and senses might be more developed; and especially that they might become acquainted with common materials and subjects, their value and price, with the common proportions of circles, lines, angles, and weight, as well as with different sizes and their measurement, with weighing, and upon opportunity with the simple microscope, for the better understanding of the constituents of bodies; and with the use of other useful instruments, together with tools and levers; to the end that this knowledge might serve them for improved understanding and practices, and to the invention of new and useful modes of using them. Thus it can be seen that there would be attained by such scholars, good proportions in their work, a steady hand, and the like advantages, such as are derived from a more intelligent use of the outward senses, which are the foundation of all the skill which nature can offer and practice can perfect."

Semler, now assisted by the city, caused twelve poor boys to be instructed in his house, by a "literary man, well experienced in mathematics, mechanics, and agriculture;" but his plan lasted only for a year and a half. In this course of instruction, "sixty-three single objects were displayed before their eyes," chiefly by models.* In 1738, these ocular demonstrations were resumed. These were placed before the scholars, says Semler, "to see, not exotic things and objects of curiosity, but only things daily necessary, and such as possess the most immediate utility in every day life. By this method, the schools, which have been verbal schools hitherto, will become real schools, since information will be given in them no more by means purely abstract, universal, and intellectual. The elementary information of little children should be given to them without books, from things themselves." Books should merely serve for repetition, and the ideas of things are to be adjoined to words. The schools, hitherto rooms of martyrdom, will, by the introduction of realities into them, become real pleasure rooms. Semler was seventy years old when he wrote these words. It would be an error to consider him, from what has above been said, an entirely earthly-minded ma-

* Sometimes by very strange ones. Thus there was a machine "which demonstrated the true reason of the rise and fall of the tide."

terialist realist, as so many of his successors were. He did not desire to remain permanently in the realm of the material, but, as he says, "to ascend from the creature to the Creator;" and he prays for the gift of enlightened eyes, which may penetrate within the penetralia of the creature. In conclusion, the pious old man, with the Psalmist, praises the works of God. "Blessed is he," he says, "who knows them holily; and twice blessed, he who holily takes pleasure in them, and thanks him for them, from the bottom of his heart."*

It has been remarked that in Francké's school there were various real studies, as botany, turning, and the like. Should not Semler, brought into such close communion with Francké, as teacher in the University of Halle, and as preacher and instructor of the German schools, have had an influence upon the improvements in teaching in the Pædagogium and Orphan-house by his pedagogical realism? It is worthy of remark, that from Francké's school came Johann Julius Hecker, who, in 1747, established the first important real school in Berlin; as did his successor in the same school, Johann Elias Silberschlag.

In treating of the stronger and stronger growth of realism, a distinction of it must be made, into two kinds. On the one hand, real studies, before entirely suppressed by the study of language, began to be more correctly estimated, and attempts were made to introduce them into the learned schools. And, on the other hand, the conviction grew, that in these schools the instruction was proper for such boys as were intended for the learned professions, and only for such, and that all other scholars were obliged to learn, and that in a superficial manner, things which could be of no use to them in after life. It was clear that, for scholars not intending a life of study, real knowledge was far more valuable than a mere purposeless beginning with Latin. The answer of the Berlin academy in the matter of Semler shows as much. Rector Gesner, of Rotenburg, in 1720, wrote to the same effect: "The one class, who will not study, but will become tradesmen, merchants, or soldiers, must be instructed in writing, arithmetic, writing letters, geography, description of the world, and history. The other class may be trained for studying." Schöttgen, rector in Dresden, wrote, in 1742, a "*Humble proposal for the special class in public city schools.*" In these schools, he says, every one is arranged with a view to the learning of Latin, and children, "who are to remain without Latin," are entirely forgotten. They are forced to learn Donatus and the grammar, which are useless for them; and

* I have, up to this time, been unable to learn further particulars about Semler. Schulz, ("*Rhenish Gazette*," March and April, 1842, p. 159,) speaks cursorily of "Semler's sad experiences at Halle."

they do not study what would be useful to mechanics, artists, or merchants. Of what use will it be to such, to have learned *anthrax, colax,* &c.? State and country need, not only people who know Latin, but others also. For these reasons he advises to organize a special class for such. "My proposal," he says, with resignation, "is already rejected before it has been brought to light. But, if what there is in it is not yet ripe, we will wait until the time comes for it."

Rector Henzky of Prenzlau, already mentioned, wrote, in 1751, a treatise "*That real schools can and must become common;*" and the learned and cautious Joh. Matthias Gesner expressed himself thus: "It is a common fault of most of our schools, that in them provision is made only for such as intend to become what are called learned men by profession; and thus a complete acquaintance with Latin is required of all young people, without any distinction. On the contrary, those things are for the most part neglected, which would be indispensable, or at least useful, in common civil life, in the arts and professions, at court and in war. * * * A well-organized gymnasium should, on the contrary, be so arranged that youth, of every extraction, age, character, and distinction, may find their account there, and be taught in them for the common good. Youth may be, with reference to their future life, divided into three classes. 1. Those who are to learn trades, arts, or to be merchants; 2. Those who are to seek their fortune at court or in war; and, 3. Those who are to remain students, and to go to the university."*

Thus many wise men demanded that regard should be had, not only exclusively and uniformly to the education of students, but also to that of children who were "to remain without Latin." But the question how to bring this to pass, was a difficult one to answer.

According to Gesner's view, each gymnasium must solve the problem of educating all these entirely different classes of children. But it is evident how difficult of solution it must have been; and how great was the danger, that the endeavor to comply with the most various requirements, would result in satisfying none of them, and becoming quite characterless.

But why such mixed schools? asked others. Would it not be better to erect separate institutions, perhaps not for every pursuit not literary, but for them all together? These questions may have become more important, as the confusion in the gymnasium from their attempt to attain different ends increased, and the conviction grew,

* J. M. Gesner, Minor German Works, p. 355. As these appeared in 1756, Gesner's "*Thoughts on the Organization of a Gymnasium,*" from which the extract in the text is taken, must have been written before that time. His plan of a gymnasium includes those three classes, for the accommodation of pupils.

that each school should have but one principle, one aim, one character.

The history of the Berlin real school is very instructive in this connection, as furnishing a series of attempts to unite and bring into harmony with each other, humanist and real studies; the instruction of those who were and were not to become men of learning.

I have named Julius Hecker as the founder of this school.* He was appointed preacher at the Church of the Trinity, in Berlin, in 1739, and at the same time became instructor of the German schools belonging to the parish. He considered institutions of instruction the seed-beds of the state, from which the young, like trees from a nursery, could be transplanted into their proper places. He therefore wished for schools which should prepare for learned studies; and others which should train for the position of citizens, artisans, soldiers, and land-owners; and others for farmers and day-laborers. In accordance with this view, he organized the real school, which he established in 1747. It consisted of three schools, partly subordinated and in part co-ordinate; of the German school, the Latin school, and the real school proper. Scholars from the Latin and German schools might receive instruction in the real school also. In the latter were taught arithmetic, geometry, mechanics, architecture, drawing, and the knowledge of nature. A knowledge of the human body was especially taught, then plants and minerals, and instruction was given in the cultivation of mulberry trees and silk-worms, and the scholars were taught by being taken to workshops. Among the classes were a manufacturing class, an architectural class, an agricultural class, a book-keeping class, and a mining class.†

The organization of the Latin school presents nothing particular. The pupils were taught weekly, Latin twelve hours, French and other languages five hours; and the boys received besides various kinds of real instruction, and were overwhelmed with lessons. Except from twelve to one, instruction was given from seven in the morning to seven at night.

In 1753, J. F. Hälm became teacher of the real school; who taught by means of intuition, after Semler's manner. For this purpose a large collection of real objects was used, among which were models of buildings, ships, chests, plows, churns, columns of the different orders, pictorial representations of an entire Roman triumphal procession, collections of merchandise, a miniature shop, a pharma-

* The information here following is mostly from Principal Schulz's "*History of the Real School in Berlin.*" See Diesterweg's "*Rheinische Blätter,*" Vols. XXV. and XXVI., 1842.

† In 1748, a boarding-house was attached to the school, in which the first boarder was Friedrich Nicolai.

cological collection, specimens of leather, &c., &c. There was also a botanical garden adapted to the real school, and a plantation of mulberries.

Hecker and Hälm laid their pedagogical views before the public. The former, among other works, wrote, in 1749, one entitled "*A sincere proposal how the Latin tongue may be maintained in worth and honor.*"* He says, "it is in vain that we strive to keep the Latin upon its ancient throne; juridical and medicinal examinations and examinations of candidates show into what a low estate it has fallen." His advice is, to pursue real studies until the eleventh or twelfth year, and then to begin Latin.

Hälm wrote, "*How to collect in real schools what is necessary and useful of languages, arts, and sciences*, 1753." He advised to give children not only oral descriptions, but also to show them things themselves, either in their natural form or in models and pictures. From his treatise will appear the connection between the specimens of leather above mentioned, and the class in manufacturing. "In the class in manufactures," he says, "they began at Christmas with the art of working in leather. To pursue this study in a manner to make it useful and practical in future life, a collection of all kinds of leather is necessary. There might be shown to youth for instruction, more than ninety kinds of leather, each piece perhaps as large as an octavo page. Among these might be all kinds of sole-leather, calves' leather, and that of cows, horses, and sheep; similar pieces of goatskin, deerskin, doeskin, buckskin, Cordovan, Morocco, Russia, and other kinds."

Julius Hecker died in 1768; and Hälm had left the school in 1759.

From the foregoing it seems clear, that there had not been enough difference, in the real schools, between the studies of those who were to be students and of those who were not; between literary studies and real studies. This occasioned the unheard of number of eleven hours of study daily; which was made necessary by the crowd of objects of instruction. It however also appears, from the same, that Hecker not only was true to his "chief principle, *non scholæ sed vitæ discendum*, but that he pushed it from a misunderstanding, even to caricatures.

The school should prepare well for life, but should not anticipate it; it should not undertake to teach what life only teaches or can teach. Hälm's words, above quoted, "At Christmas we began with the art of working in leather," must appear silly to every intelligent

* Ancient and Modern Schools, collected by Biedermann, 1752, Part VI.

man. Is this the meaning of the wise maxim, *non scholæ sed vitæ discendum?* Had the real idea of life become wholly lost in that hard and dead period?

After the death of Hecker, Johann Elias Silberschlag, known as a mathematician and naturalist, became director of the institution.* He seems to have in view a more popular distinction of the three institutions here united under the common name of "real school." He gave to the three the names of Pædagogium, art school, and German or artisans' school.

The German school was the elementary school for all, but had also an especial class in trades. In the art school, the students laid the foundation of a knowledge of mathematics, Latin, and French, although this school was particularly intended for workmen, farmers, and others not proposing to study. The teachers of mathematics in this school gave as rules, "Axioms and theorems which did not require theoretical acuteness;" these being needed in the Pædagogium. In this there were two theoretical-mathematical classes; in the lower of which arithmetic was taught, in the other algebra. The other studies of the Pædagogium were the usual ones of the higher gymnasium class. Silberschlag leaving in 1784, Andreas Jacob Hecker succeeded him in his office. An education for special pursuits was more and more aimed at in the artisans' school; there were given in it special lectures to future miners and smelters, and particularly for those preparing to become practical geometers, artillerists, foresters, farmers, merchants, &c. Some hours weekly were even devoted to instruction in German; "in order to make those, who shall wish in future to engage as secretaries to high boards of authorities in the country, better acquainted with the course of business." Thus the real school of arts was a gathering of the most dissimilar schools for special pursuits. "The idea rises of necessity," says the historian of the school, "that where the endeavor is to reach every one, but little will be actually attained. And this was the fact with our real school."

During the same time, the Pædagogium, under Hecker, acquired more the peculiar character of a literary school. In 1797, on the occasion of its fiftieth anniversary festival, it took the name of the Friedrich Wilhelm's Gymnasium;" and, in the year 1811, it was finally separated from the real school, in respect to its teachers and its lectures.† Long and hard experience had at last brought the conviction that the previous close connection of the two institutions was a *mésalliance*, by which both lost their independence of character.

* It is characteristic of the man, that he was at the same time a consistorial counselor and high counselor of public buildings.

† That is, from the real school in its more proper sense; the school of arts of Silberschlag.

The purposes of the two institutions being so different, it was necessary that the teaching in real studies in the gymnasium must be entirely distinct from that in the real schools; and the instruction in language in the real school from that in the gymnasium. There must be a distinction in selection, method, and design.

One observation suggests itself here. Gymnasiums are, as to their instruction, really and clearly distinct universities, in this; that they look only to the general education, as the foundation for instruction in all vocations, while the universities are characterized by study in the faculties, and thus prepare for the entrance into real life. It was with justice that great displeasure was manifested, when, at the end of the last century, a master required that future jurists, in the gymnasium, should study, instead of Tacitus and Virgil, the institutions of Heineccius. The gymnasium knows no professional studies, and should know of none; lest it should forcibly communicate, to immature boys, a professional education without any real basis.

Does this same distinction apply to real schools? was it not the greatest of mistakes, that in the Berlin school direct instruction was given for miners, farmers, &c., &c.?

Such a purpose was that of the excellent Spilleke, who assumed the direction of the real school in 1820.* His opinion was, that this school should, in its higher classes, "give or at least introduce to such an education as, without pretending to thorough classic studies, should prepare for the higher relations of society; but a more special preparation, such as was aimed at in earlier times in this part of the school, is not proper."

If we understand Spilleke here, he suggests new questions. If the real schools must correspond with the gymnasiums, how must those real studies be organized which correspond with the universities; in which the real scholars intend to finish their studies?

Are our polytechnic schools and higher industrial schools true "real" universities? Do they, by virtue of the great variety of their studies in arts and trades, become divided into parts which correspond to the faculties of the universities? Or are such "real" universities not practicable, and must there be a special school for each trade, because most occupations have some peculiar elements in their life? The miner must ultimately be trained in the mine, the sailor on the sea, the farmer in the country; but all three can receive their general preparatory training in the same real school. And indeed,

* A. J. Hecker died in 1819, and was followed by Bernardi, who died the next year. After him came Spilleke, who was succeeded, after his death, in 1841, by F. Ranke, distinguished both as an educator and a man of learning.

if students of many arts and trades should enjoy primary instruction, whether carried more or less far, should not this be followed by a purely practical study and drill in the pursuit, under the guidance of skillful masters; and should not their more complete artistic or scientific training come after these years of apprenticeship?

But I must not too far transgress my limits as a historian. When rector Schöttgen, in 1742, published his "*Modest proposal*," for making suitable provision for the instruction of children who are not to study Latin, he hopelessly added, as we have seen, "My proposal is already rejected, before it has been brought into the light." But encouraging himself, he went on: "But yet, if what is proposed therein is not yet ripe, we will wait until its time shall come."

The old rector prophesied rightly. One century after he wrote, there were, in the Prussian states alone, forty-two real institutions, to one hundred and twenty-six gymnasiums.

[To enable our readers, who may not have access to Bache's "*Education in Europe*," or to Barnard's "*National Education in Europe*," we transfer from the latter the following account of a Real School, and Art Institute of our day, in Prussia, as compared with a Gymnasium of the highest grade.—Ed.]

FREDERICK WILLIAM GYMNASIUM OF BERLIN.

This institution dates from 1797, and was at first an appendage to the "real school" of Mr. Hecker. It is now a royal institution, and is independent of the real school, except so far that it has the same director, and that the preparatory classes are in the real school, in which, or in other equivalent schools, the pupils are taught until ten years of age. The qualifications for admission are those contained in the general account of the gymnasia. This gymnasium had, in 1837, four hundred and thirty-seven pupils, divided into six classes, and instructed by fourteen teachers and six assistants. The second and third classes are subdivided into two parts, called upper and lower, pursuing different courses, and both divisions of the third class are again subdivided into two others, for the convenience of instruction. The course in each class occupies a year, except in the first, which is of two years. Pupils who enter in the lowest class, and go regularly through the studies, will thus remain nine years in the gymnasium. The numbers of the several classes in 1837 were, in the first, fifty-four; in the upper second, thirty-two; lower second, forty-seven; upper third division, first, or A, thirty-six; second division, or B, thirty-six; lower third, division first, or A, thirty-eight; division second, or B, thirty-two; fourth class, fifty-five; fifth, fifty-seven; and sixth, fifty. Each division averages, therefore, nearly forty-four pupils, who are at one time under the charge of one teacher. One hundred and eight were admitted during the year, and the same number left the gymnasium; of these, twenty-one received the certificate of maturity to pass to the university, viz., ten who intend to study law, three medicine, five theology, one theology and philology, one philosophy, and one political economy, finance, &c., (cameralistic.) Of these all but five were two years in the first class; out of this number two were two years and a half in the first class, and three more had been in the gymnasium less than two years, having entered it in the first class. The average age at leaving the gymnasium was nearly nineteen years, and the greatest and least, respectively, twenty-two and between sixteen and seventeen years. It appears, thus, that on the average, the pupils actually enter at ten, and remain nine years, as required by rule.

The subjects of instruction are Latin, Greek, German, French, religious instruc-

tion, mathematics, (including arithmetic, algebra, and geometry,) natural philosophy and natural history, history, geography, writing, drawing, vocal music, and Hebrew for theologians.

The numbers attached to the names of the different classes, in the following programme, show the number of hours of study per week in the regular branches in which the division of classes takes place. In like manner, the numbers attached to the several subjects of study show how many hours are occupied per week in each of the subjects by the several classes.

SIXTH CLASS, THIRTY HOURS.

Latin. Inflections of nouns, &c. Comparisons. Conjugation of the indicative moods of regular and of some irregular verbs. Translation from Blume's elementary book. Exercises from Blume. Extemporalia. Ten hours.

German. Etymology and syntax. Exercises in writing upon subjects previously narrated. Exercises in orthography, reading, and declaiming. Four hours.

French. Etymology, to include the auxiliary verbs, in Herrmann's grammar. Oral and written exercises. Reading and translation. Exercises on the rules from the grammar. Three hours.

Religion. Bible history of the Old Testament. Committing to memory selected verses. Two hours.

Geography. Delineation of the outlines of Europe, Africa, Asia, and America, from determinate points given. Divisions of the countries, with their principal cities, rivers, and mountains. Two hours.

Arithmetic. The four ground rules, with denominate whole numbers. Their applications. Four hours.

Writing. Elements of round and running hand. Dictation. Writing from copy slips. Three hours.

Drawing. Exercises in drawing lines. Two hours.

FIFTH CLASS, TWENTY-NINE HOURS.

Latin. Etymology. Use of the prepositions. The accusative before an infinitive, practiced orally and in writing, and extempore, and in exercises. Translation from Blume's reader. Ten hours.

German. Parsing, reading, and declamation. Exercises on narrations. Four hours.

French. Etymology, by oral and written exercises. Easier stories from Herrmann's reader. Three hours.

Religion. Explanation of the gospels, according to St. Matthew and St. Luke. Committing to memory the principal facts. Two hours.

Geography. Review of the last year's course. Rivers and mountains of Europe, and chief towns, in connection. Two hours.

Arithmetic. Review of the preceding. Fractions. Four hours.

Writing. Running hand from copy slips. Two hours.

Drawing. Drawing from bodies, terminated by planes and straight lines. Two hours.

FOURTH CLASS, TWENTY-EIGHT HOURS.

Latin. Review of etymology. The principal rules enforced by oral and written exercises and extemporalia. Translation from Jacob's reader and Corn. Nepos. Ten hours.

German. Compositions on subjects previously read. Declamation. Reading from Kalisch's reader. Parsing. Three hours.

French. Review of etymology. Irregular verbs. Reciprocal verbs. Anecdotes and narrations from Herrmann's grammar, and committing the principal to memory. Two hours.

Religion. Gospel, according to St. Matthew, explained. Verses and psalms committed to memory. Two hours.

Geography. Political geography of Germany, and of the rest of Europe. Review of the geography of the other parts of the world. Three hours.

Arithmetic. Review of fractions. Simple and compound proportion. Partnership. Simple interest. Three hours.

Geometry. Knowledge of forms, treated inductively. One hour.

Writing. Running hand, from copy slips. Two hours.

Drawing. From bodies bounded by curved lines. Two hours.

LOWER THIRD CLASS, THIRTY HOURS.

Latin. Syntax. Rules of cases from Zumpt. Exercises and extemporalia. Inflections formerly learned reviewed. Cornelius Nepos. Eight hours.

Greek. Etymology, from Buttmann's grammar to regular verbs, included. Translation from Greek into German from Jacob's, from German into Greek from Hesse's exercises. Six hours.

German. Compositions in narration and description. Declamation. Two hours.

French. Repetition of inflections, and exercises by extemporalia and in writing. Translation of the fables from Herrmann's reading book, 2d course. Two hours.

Religion. Morals, and Christian faith. Two hours.

Geography. Physical geography. Europe and the other parts of the world. Two hours.

History. General view of ancient and modern history. Two hours.

Mathematics. Legendre's geometry, book I. Decimals. Algebra. Square and cube root. Four hours.

Drawing. Introduction to landscape drawing. Two hours.

UPPER THIRD CLASS, THIRTY HOURS.

Latin. Division I. Syntax, from Zumpt. Review of the preceding course. Oral exercises in construction of sentences. Written exercises and extemporalia. Cæsar Bell. Gall.

books 1, 2, and 7, in part. Ovid's Metamorphoses, extracts from books 7 and 8. Prosody, rules from Zumpt. Ten hours.

Greek. Division I. Etymology, from Buttmann's grammar. Oral and written exercises and extemporalia. Jacob's reader. Six hours.

German. Examination of exercises on historical subjects. Poetical selections for declamation. Two hours.

French. Exercises in translation. Written exercises. Extemporalia. Two hours.

Religion. Principal passages from the gospels gone over. General view of the Old Testament writings. Two hours.

History and Geography. Roman history, from the Punic Wars to the destruction of the western empire. History of the middle ages, three hours. Review of the five general divisions of the world, one hour. Four hours.

Mathematics. Geometry. Legendre, books 1 and 2, and part of 3. Algebra, with exercises from Meyer Hirsch. Four hours.

LOWER SECOND CLASS, THIRTY-ONE HOURS.

Latin. Extracts from Livy and Cæsar de Bell. Civ. Review of Bell. Gall., books 2 and 3. Syntax. Exercises and extemporalia. Committing to memory exercises from Livy and Cæsar. Ovid's Metamorphoses, books 11 to 14. Eight hours.

Greek. Homer's Odys., 11, 12, 13, and 14. Exercises on the dialects. Xenophon's Anab. 1. 2, and part of 3. Excerpts from the grammar reviewed. Exercises and extemporalia. Syntax. Six hours.

Hebrew. Grammar, ending with irregular verbs. Easier parts of historical books of Scripture translated. Vocabulary learned by rote. Exercises on regular and irregular verbs out of the recitation room. Two hours.

German. Correction of written exercises and essays. Exercises on delivery. Two hours.

French. Voltaire's Charles XII. Exercises and extemporalia. Two hours.

Religion. Explanation of the principal parts of the Epistles of St. Paul, with historical sketches, and a view of the life of early Christian communities. Two hours.

History. Roman history, from the Punic Wars. History of the middle ages concluded. General view of history. Three hours.

Mathematics. Geometry to proportions and simple figures. Elements of algebra. Logarithms. Four hours.

Natural History. Mineralogy. Botany, especially of native plants. Two hours.

UPPER SECOND CLASS, THIRTY-TWO HOURS.

Latin. Cicero's Orations, pro. Rosc. Amer., de Amic., de Senectute. Livy, books 22 to 25, inclusive. Virgil's Æneid, books 1 and 2. Some eclogues and excerpts from Georgics. Exercises and extemporalia. Nine hours.

Greek. Homer's Iliad, books 4 to 11, inclusive. Arrian Alex. expedition, books 1 and 2. Buttmann's grammar, with exercises and extemporalia. Six hours.

Hebrew. Books of Judges and of Ruth, with exercises of syntax. Easy exercises, and committing vocabulary to memory out of the class-room. Two hours.

German. Essays. Delivery. Two hours.

French. Excerpts from Herrmann and Brüchner's manual of the more recent French literature. Two hours.

Religion. Christian faith and morals. Two hours.

History. Review of ancient history and geography, using the Latin language. Three hours.

Mathematics. Arithmetical geometry and plane trigonometry. Algebraic exercises. Polygons. Stereometry. Simple and quadratic equations. Four hours.

Physics. General physics. Electricity and magnetism. Two hours.

FIRST CLASS, THIRTY-ONE HOURS.

Latin. Horace's Odes, books 3 and 4. Cicero against Verres. Tacitus, Annals, books 11 and 12, and extracts from 3 to 6. Cicero, Tusc. quest. Extempore translations from German into Latin. Exercises. Declamation. Eight hours.

Greek. Homer's Iliad, book 16, Odyssey, books 9 to 16, inclusive. Hippias Major, Charmides, and Gorsias of Plato, (excerpts.) Sophocles' Edip. tyr. and Antigone. Grammatical exercises. Buttmann's grammar. Six hours.

Hebrew. Second book of Kings. Genesis. Psalms, 61 to 100. Grammatical criticisms of historical excerpts, or of psalms, as an exercise at home. Two hours.

German. Criticism of compositions. General grammar, and history of the German grammar and literature. One hour.

French. Selections from Scribe and Delavigne. Exercises and extemporalia. Two hours.

Religion. History of the Christian church, to the times of Gregory VII. Two hours.

History. Modern history, and review. Three hours.

Mathematics. Plane trigonometry and application of algebra to geometry. Algebra. Mensuration and conic sections. Binomial theorem. Exponential and trigon. functions. Four hours.

Physics. Physical geography. Mechanics. Two hours

Philosophy. Propædeutics. Logic. One hour.

There are five classes for vocal music, the fifth receiving two hours of instruction in musical notation and singing by ear. The fourth, time and cliffs, &c. Exercises in the natural scale, and harmony Songs and chorals with one part. The third, two hours, formation of the scale of sharps, running the gamut with difficult intervals, combined with the practical exercises of the last class. The second, two hours, repetition of tones; sharps, and flats. Formation of the scale of flats. Exercises of songs and chorals, in two parts. The first class is an application of what has been learned, as well as a continuation of the science and art, and all the pupils do not, of course, take part in this stage of the instruction. The course is of four hours per week, two for soprano and alto, one for tenor and bass, and one for the union of the four parts. The proficiency is indicated by the fact, that the pupils perform very creditably such compositions as Haydn's "Creation" and Handel's "Messiah."

The extemporalia spoken of in the courses of language, consist of written translations made on the spot by the pupils into a foreign language, of sentences spoken in the vernacular by the teacher. These sentences are, of course, adapted to the progress of the pupil, and are prepared beforehand by the teacher who renders them, especially in the early parts of the course, the application of the rules of grammar on which the pupil is engaged, or of peculiarities of idiom to which his attention is called.

In the classical course, the oral and written exercises are varied in their relative proportions to each other. The translation from Latin or Greek into German, and vice versa, the grammatical exercises, Latin compositions or essays, the extemporalia before explained, the practice in versification, &c., are varied in amount in the different classes, according to the views of the instructor.

One characteristic difference between the classical instruction in the higher classes and in those of similar schools in England and our country, is that, in general, it supposes the grammatical minutiæ to have been fully impressed in the lower classes, and discusses philological questions, varieties of reading and collateral subjects of antiquities, history, biography, and geography. The students receive much oral instruction, which they are required to record. The same is the practice to even a greater extent in the other departments of instruction, and the students thus acquire a facility in taking notes which they turn to good account in the university lectures, and which strikes a stranger with surprise on first witnessing it.

Most of the pupils in this class of schools begin their classical course at nine or ten years of age, and yet, judging by the progress shown in the programme of the first class, and by the scholars which the universities of northern Germany turn out, and which are, in fact, formed in the gymnasia, the proficiency is all that can be desired. It is what a youth of nineteen issuing from one of our colleges would be proud of, and clearly proves that the classics are not begun too late.

The mother tongue and French are both taught in these institutions, in combination with the classical studies. These languages are not merely entered upon the programme, but are actually more or less thoroughly taught, according to the time which is allotted and the skill of the teacher. The course of German would seem calculated to make both writers and speakers, and, probably, if the demand for the latter were equal to that of the former, this would prove true in the latter case, as it does in the former.

The religious characteristic of these schools is a striking one, and important in its effects. The Bible is taught rather than a particular creed, though from the fact that the pupils are nearly all of one creed, this forbearance is not essential, and is not always exercised. The separation of religious from other instruction can but have a most injurious tendency, and their connection, as in these schools, on the contrary, a happy influence. Religious knowledge is classed with the sciences in the formal division of the subjects of study.

The courses of physics of the Frederick William gymnasium are exceedingly well calculated to fullfil their object, to give general ideas of natural phenomena, without going into what may be considered technical minutiæ; in the latter school physics is connected with an excellent course of physical geography. It seems to me doubtful whether, in the natural history course, more than a general outline of the subject, is necessary, with the prosecution, practically, of such branches as the locality of the institution may render applicable for improving the habits of observation and discrimination. The scientific details of the different branches belong rather to special purposes of study than to general education. The experience of these institutions may, however, be appealed to as proving the entire compatibility of such instruction with an otherwise sound system, and the entire possibility of accomplishing it without neglecting other more important branches.

Drawing and vocal music, which form parts of the regular courses of all these institutions, have not yet found their way into the systems of other nations on the same footing with the regular studies. As a part of physical training, they are important, and as offering a relief from severer pursuits, further recommend themselves in this connection.

The Frederick William Gymnasium is regarded by Dr. Bache, as a fair specimen of this class of schools in Prussia; in the organization and instruction of which a good degree of liberty is tolerated by the government, to enable them the better to meet the peculiar circumstances of each province, and the peculiar views of each director.

The Royal Real School, and City Trade School of Berlin, furnish a course of instruction of the same general value for mental discipline, but better calculated for that class of pupils who are destined in life, not for what are designated as the learned profession, but for tradesmen and mechanics. There is less of verbal knowledge but more of mathematics and their application to the arts; and the whole is so arranged as to facilitate the acquisition of those mental habits which are favorable to the highest practical success.

ROYAL REAL SCHOOL OF BERLIN.

The Royal Real School of Berlin was founded as early as 1747, by Counsellor Hecker. At the period in which this school was founded, Latin and Greek were the exclusive objects of study in the learned schools, and the avowed purpose of this establishment was that "not mere words should be taught to the pupils, but realities, explanations being made to them from nature, from models and plans, and of subjects calculated to be useful in after-life." Hence the school was called a "real school," and preserves this name, indicative of the great educational reform which it was intended to promote, and the success of which has been, though slow, most certain.

The successor of Hecker, in 1769, divided this flourishing school into three departments, the pedagogium, or learned school, the school of arts, and the German school: the whole establishment still retaining the title of real school. The first named department was subsequently separated from the others, constituting the Frederick William gymnasium; the school of arts, and the German, or elementary school, remain combined under the title of the royal real school. The same director, however, still presides over the gymnasium and the real school.

The question has been much agitated, whether the modern languages should be considered in these schools as the substitutes for the ancient in intellectual education, or whether mathematics and its kindred branches should be regarded in this light. Whether the original principle of the "realities" on which the schools were founded, was to be adhered to, or the still older of verbal knowledge, only with a change of languages, to be substituted for it. In this school the languages will be found at present to occupy a large share of attention, while in the similar institution, a description of which follows this, the sciences have the preponderance.

In the royal real school the branches of instruction are—religion, Latin, French, English, German, physics, natural history, chemistry, history, geography, drawing, writing, and vocal music. The Latin is retained as practically useful in some branches of trade, as in pharmacy, as aiding in the nomenclature of natural history, and as preventing a separation in the classes of this school and that of the gymnasium, which would debar the pupils from passing from the former to the latter in the upper classes. It must be admitted that, for all purposes but the last, it occupies an unnecessary degree of attention, especially in the middle classes.

The following table shows the distribution of time among the courses. There are seven classes in numerical order, but ten, in fact, the third, fourth, and fifth being divided into two; the lower fourth is again, on account of its numbers, subdivided into two parallel sections. Of these, the seventh, sixth, and fifth are elementary classes, the pupils entering the seventh at between five and seven years of age. In the annexed table the number of hours of recitation per week of each class in the several subjects is stated, and the vertical column separating the elementary classes from the others, contains the sum of the hours devoted to each branch in the higher classes, excluding the lower section of the fourth class, which has not a distinct course from that of the other division.

TABLE SHOWING THE NUMBER OF HOURS OF RECITATION PER WEEK, OF EACH CLASS, IN THE SUBJECTS TAUGHT IN THE ROYAL REAL SCHOOL OF BERLIN.

SUBJECTS OF STUDY.	First Class.	Second Class.	Third Class, A.	Third Class, B.	Fourth Class, A.	Fourth Class, B. I. / Fourth Class, B. II.		Sum of the hours in the seven upper classes.	Fifth Class, A.	Fifth Class, B.	Sixth Class.	Seventh Class.	Proportion of other studies to German in the		
													Royal Real School.	First six classes of the Fred'k. Wm. Gymn.	In all the classes of the Fred'k. Wm. Gymn.
Latin,	4	4	4	5	6	5	6	28					1.4	2.9	3
French,	4	4	4	3	3	4	4	22	4	5			1.1	0.7	0.9
English,	2	2	2					6					0.3		
German,	3	3	3	4	3	4	4	20	8	8	10	10	1.0	0.8	1.0
Religion,	2	2	2	2	2	2	2	12	2	3	2	2	0.6	0.6	0.8
Mathematics,*	6	6	5	6	7	6	4	35	4	3	6	6	1.7	1.1	1.6
Natural History,	3	2	2	2				9					0.4	0.1†	0.1
Physics,	2	2	2	2				8					0.4	0.2†	0.2
Chemistry,	2	2	2	2				8					0.4		
Geography,				3	3	3	3	9	2	2	2		0.4	0.5	0.5
History,	3	3	3	2	2	2	2	15	2	2	2		0.7	0.3	0.7
Drawing,	2	2	2	2	2	2	2	12					0.6	0.4	0.4
Writing,					2	2	2	4	4	4	6	8	0.2	0.3	0.3
Singing,	2	4	3	2	2	2	2	15					0.7	0.6	0.6
Total,	36	36	35	35	32	32	32		26	26	26	26			

Pupils who enter this school between five and seven years of age, and go regularly through the elementary classes, are prepared at ten to pass to its higher classes, or to enter the lowest of the gymnasium. It is thus after the fifth class that a comparison of the two institutions must begin. The studies of the real school proper, and of the gymnasium, have exactly the same elementary basis, and they remain so far parallel to each other that a pupil, by taking extra instruction in Greek, may pass from the lower third class of the former to the lower third of the latter. This fact alone is sufficient to show that the real schools must be institutions for secondary instruction, since the pupils have yet three classes to pass through after reaching the point just referred to. It serves also to separate the real schools from the higher burgher schools, since the extreme limit of the courses of the latter, with the same assistance in regard to Greek, only enables the pupil to reach the lower third class of the gymnasium. In general, a pupil would terminate his studies in the real school at between sixteen and eighteen years of age. The difference between the subjects of instruction in the real school and the Frederick William gymnasium, consists in the omission in the former of Greek, Hebrew, and philosophy, and the introduction of English and chemistry. The relative proportions of time occupied in the same subjects in the two schools, will be seen by comparing the two columns next on the right of the numbers for the seventh class, in the table just given. The first of these columns contains the proportion of the number of hours per week devoted to the different subjects in the six classes of the real school above the elementary, the number of hours devoted to the German being taken as unity; and the second, the same proportion for six classes of the gymnasium, beginning with the lowest, the same number of hours being taken as the unit, as in the preceding column. To bring the natural history and physics into comparison, I have taken the numbers for the

* Including arithmetic, geometry, algebra, and trigonometry.
† These numbers include the entire course.

upper classes of the gymnasium in which these branches are taught. Of the courses common to the two schools, those to which nearly equal attention is paid in both institutions, are—the religious instruction, the German, geography and history, writing, and vocal music. The French, mathematics, physics, and natural history, predominate in the real school, the Latin in the gymnasium. The effect of reckoning the first, second, and upper third classes of the gymnasium, does not materially change the proportionate numbers of the courses which are common to the two schools, except as to Latin and mathematics. To show this, the column on the extreme right of the table is introduced, containing the proportions for all the nine classes of the Frederick William gymnasium.

There were, in 1838, five hundred and ten pupils in this real school, under the charge of fourteen regular or class masters, teaching several subjects in the lower classes, and of six other teachers. Each of the eleven class divisions thus averages about forty-six, who are under the charge of one teacher at a time.

The elementary course in the real school is similar to that described in the burgher schools, beginning with the phonic method of reading, the explanations of all the words and sentences being required at the same time that the mechanical part of reading is learned. Written and mental arithmetic are taught together in the lowest class. The religious instruction consists of Bible stories adapted to their age; and verses are committed to improve the memory of words. The exercises of induction are practiced, but in a way not equal to that with objects, introduced by Dr. Mayo in England. Some of the pupils are able to enter the gymnasium after going through the two lowest classes.

In regard to the real classes proper, as I propose to enter into the particulars of the course of study of the trade school, I shall here merely make a few remarks upon two of the branches studied in them, namely, French and drawing. The remarks in regard to the French will serve to show how great a latitude a teacher is allowed in the arrangement of his methods, the result of which is, that those who have talent are interested in improving their art by observation and experiment. The French teacher to whom I allude had been able to secure the speaking, as well as the reading, of French from his pupils. From the very beginning of the course this had been a point attended to, and translation from French into German had been accompanied by that from German into French: the conversation on the business of the class-room was in French. The pupils were exercised especially in the idioms of the language in short extempore sentences, and the differences of structure of the French and their own language were often brought before them, and the difficulties resulting from them anticipated. Difficult words and sentences were noted by the pupils. Declamation was practiced to encourage a habit of distinct and deliberate speaking, and to secure a correct pronunciation. The chief burthen of the instruction was oral. Without the stimulus of change of places, the classes under this gentleman's instruction were entirely alive to the instruction, and apparently earnestly engaged in the performance of a duty which interested them. If such methods should fail in communicating a greater amount of knowledge than less lively ones, which I belive can not be the case, they will serve, at least, to break down habits of intellectual sloth to promote mental activity, the great aim of intellectual education.

The drawing department of this school is superintended by a teacher who has introduced a new method of instruction, particularly adapted to the purpose for which drawing is to be applied in common life and in the arts; a method which is found to enable a much larger proportion of the pupils to make adequate progress than the ordinary one of copying from drawings.* In this method the pupil begins by drawing from simple geometrical forms, those selected being obtained from models in wood or plaster, of a square pillar,† a niche, and a low cylinder, (the form of a mill-stone.) The square pillar separates in joints, affording a cube and parallelopipeds of different heights. The hemisphere which caps the niche may be removed, leaving the concave surface of its cylindrical part. The exercises of the pupil ran thus: First, to place upon a board, or upon his paper or

* Mr. Peter Schmidt, who now, in his old age, has received from the government a pension in return for the introduction of his method, and the instruction in it of a certain number of teachers.

† Seven and a half inches high, and one inch and a half in its square section.

slate, a point vertically above another, or so that the lines joining the two shall be parallel to the right or left hand edge of the board, paper, or slate. Second, to join them. Third, to place a point horizontally from the second, and at a distance equal to that between the first and second points. Fourth, to place one vertically over the third, and at a distance equal to that below the first, and to join the third and fourth. The first and fourth being then joined, a square is formed. After practice in this, the simple elevation of the cube is drawn. Next, a perspective, by the use of a small frame and silk threads, such as is common in teaching the elements of this subject, and by means of which the pupil acquires readily a knowledge of the practice. The drawing of lines in various positions, and with various proportions, terminates this division of the subject. The niche and cylinder afford a similarly graduated series of lessons on the drawing of curved lines, and the drawing of lines of different degrees of strength and of shadows is introduced. This is accompanied with some of the more simple rules of shadow and shade. More difficult exercises of perspective follow from natural objects and from works of art or mechanism, according to the direction to the pupil's attainments and the amount of taste which he displays. This method of teaching has been introduced quite generally in Prussia, and with the best results as to the formation of accuracy of eye and of hand.

CITY TRADE SCHOOL.

The City Trade School was founded to give a more appropriate education for the mechanic arts and higher trades than can be had through the courses of classical schools. It is a great point gained, when the principal is admitted that different kinds of education are suited to different objects in life; and such an admission belongs to an advanced stage of education. As a consequence of a general sentiment of this kind, numerous schools for the appropriate instruction of those not intended for the learned professions grow up by the side of the others.

The city of Berlin is the patron of the trade school which I am about to notice, as the king is of the real school already spoken of. Its stability is thus secured, but the means of furnishing it with the necessary materials for instruction are liberally provided.* The trade school is a day school, and consists of five classes, of which the lowest is on the same grade as to age and qualification at admission, as the fourth class of a gymnasium. It is assumed that at twelve years of age it will have been decided whether a youth is to enter one of the learned professions, or to follow a mechanical employment, or to engage in trade, but the higher classes are not closed against pupils. Of the five classes, four are considered necessary for certain pursuits and the whole five for others; the courses of all but the first class last one year, that of the first, two years, a youth leaving the school at from 16 to 17 or 18 years of age, according to circumstances. During the year 1836–7, the number of pupils in the several classes were, in the first class, eleven; in the second, twenty-nine; in the upper third, forty-three; in the lower third, fifty-two; in the fourth, fifty; total, one hundred and eighty-five; from which numbers it appears that a considerable proportion of the pupils leave the school without entering the first class. The number of teachers is nineteen, five being regular or class teachers, and fourteen assistants. The director gives instruction.

The following list of the callings to which pupils from this school have gone on leaving it, will show that it is really what it professes to be, a school for the instruction of those who intend to follow occupations connected with "commerce, the useful arts, higher trades, building, mining, forestry, agriculture, and military life;" and further, that its advantages are appreciated by the class for whom it is intended. The list includes the pupils who have left the school from the first and second classes, in the years 1830, 1832, 1833 and 1837. From the first class, two teachers, five architects, one chemist, twenty-six merchants, one machinest, two calico-printers, two glass-workers, one cloth manufacturer, one silk manufacturer, one miner, thirteen agriculturalists, eight apothecaries, two gardeners, one painter, one mason, one carpenter, one tanner, one miller, one baker, one potter, one saddler, one soap-boiler, one cabinet-maker, two soldiers, one musician, five to

* The present director of this school, Mr. Kloden, was formerly director of the higher burgher school at Potsdam, and is one of the most distinguished teachers in his line in Persia.

public offices, one to the trade institution, six to gymnasium. From the second class, forty-one merchants, one teacher, one chemist, one machinest, one ship-carpenter, nine agriculturist, one sugar-refiner, three dyers, one tanner, one brewer, two distillers, one miner, two lithographers, one dye-sinker, three apothecaries, one dentist, two painters, two gardeners, three masons, five carpenters, one miller, four bakers, one butcher, one to the trade institution, three to public offices, two to a gymnasium, one musician, one veterinary surgeon, one soldier, being ninety from the first class, and ninety-seven from the second, in the period of four years.

In the course of instruction, the sciences and kindred branches are made the basis, and the modern languages are employed as auxiliaries, the ancient languages being entirely omitted. The subjects embraced in it are—religious instruction, German, French, English, geography, history, mathematics, physics, chemistry, technology, natural history, writing, drawing, and vocal music.

The courses are fully laid down in the following list, beginning with the studies of the lowest or fourth class.

FOURTH CLASS.

*Religious Instruction.** The gospel according to St. Luke, and the Acts of the Apostles explained, with a catechetical development of the truths of religion and ethical applications. Two hours per week.

German. Grammatical exercises in writing. Recital of poetical pieces.

French. Grammatical exercises. Regular and irregular verbs. Reading from Lauren's Reader. One hour of conversation. Four hours.

Arithmetic. Mental and written, including proportions and fractions, with the theory of the operations. Four hours.

Geometry. Introductory course of forms. Two hours.

Geography. Elementary, mathematical, and physical geography. Two hours.

Natural History. In the summer term, elements of botany, with excursions. In the winter, the external characters of animals. Two hours.

Physics. Introductory instruction. General properties of bodies. Forms of crystals, specific gravity, &c. Two hours.

Writing. Two hours.

Drawing. Outline drawing and shadows, from models and copy-boards. Two hours.

Vocal Music. Two hours.

LOWER THIRD CLASS.

Religious Instruction. The Acts of the Apostles and the Epistles read and explained. Two hours.

German. Grammar with special reference to orthography and etymology. Written exercises upon narrations made by the teacher. Delivery of poetical pieces. Four hours.

French. Translation from French into German from Gredicke's Chrestomathy. Grammar; irregular verbs. Extemporalia, and translations from German into French. Four hours.

Arithmetic. Partly abstract, partly practical, from Diesterweg's Instructor. Four hours.

Geometry. Determination of angles in triangles and polygons. Equality of triangles. Dependance of angles and sides of triangles. Constructions. Three hours.

Geography. Physical description of the parts of the earth, except Europe. Two hours.

Natural History. Mineralogy. In summer, botany, the class making excursions for practical exercise. Man. Three hours.

Physics. General properties of bodies and solids in particular. Doctrines of heat and their application to natural phenomena and the arts. Two hours.

Chemistry. Introduction. Atmospheric air. Experimental illustrations of chemistry, applied to the arts. Two hours.

Writing. Two hours. *Architectural and topographical drawing.* Two hours. *Drawing* by hand for those who do not take part in the other. Two hours.

Vocal Music. Two hours.

UPPER THIRD CLASS.

Religious Instruction. Christian morals, from Luther's Catechism. Two hours.

German. Simple and complex sentences. Compositions on special subjects. Poems explained and committed. Four hours.

French. Translation from Gredicke's Chrestomathy, oral and in writing. Written translations from Beauvais' Introduction, from German into French. Grammar, examples treated extempore. Four hours.

Arithmetic. Properties of numbers. Powers. Roots. Decimal fractions Practical Arithmetic from Diesterweg. Four hours.

Geometry. Similar figures. Geometrical proportion. Exercises. Mensuration of rectilinear figures. Three hours.

Geography. Physical geography of Europe, and in particular of Germany and Prussia. Two hours.

Natural History. Continuation of the mineralogy of the lower third class. Review in outline of zoology and the natural history of man in particular. Botany, with excursions in summer. Three hours.

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* Roman Catholic pupils are not required to take part in this instruction, which is communicated by a Protestant clergyman.

Physics. Electricity and magnetism, with experiments. Two hours.
Chemistry. Water and non-metallic bodies, with experiments. Two hours.
Writing. Two hours. *Architectural and topographical drawing.* Two hours. Some of the pupils during this time are engaged in ornamental drawing.
Vocal Music. Two hours.

SECOND CLASS.

Religious Instruction. Explanation of the first three gospels. History of the Christian religion and church to the reformation. Two hours.
German. Correction of exercises written at home, upon subjects assigned by the teacher. Oral and written exercises. Introduction to the history of German poetry. Three hours.
French. Grammar; extemporalia for the application of the rules. Written and oral translations from German into French, from Beauvais' Manual, and vice versa, from Ideler and Nolte's Manual. Four hours.
English. Exercises in reading and speaking. Translation into German, from Burkhardt. Dictation. Verbs. Two hours.
Arithmetic. Commercial Arithmetic. Algebra, to include simple and quadratic equations. Logarithms. Three hours.
Geometry. Circles. Analytical and plane trigonometry. Three hours.
Geography. The states of Europe, with special reference to their population, manufactures and commerce. Two hours.
History. Principal events of the history of the middle ages and of later times, as an introduction to recent history. One hour.
Natural History. Mineralogy. Physiology of plants. Three hours.
Chemistry. Metallic bodies and their compounds, with experiments. Three hours.
Architectural, topographical, and plain drawing. Drawing with instruments. Introduction to India ink drawing. Beginning of the science of constructions. Two hours.
Drawing. From copies, and from plaster and other models. Two hours. This kind of drawing may be learned instead of the above.
Vocal Music. Two hours.

FIRST CLASS.

Religious Instruction. History of the Christian religion and church continued. References to the bible. One hour.
German. History of German literature to recent times. Essays. Exercises of delivery. Three hours.
French. Reading from the manual of Buchner and Hermann, with abstracts. Classic authors read. Review of Grammar. Exercises at home, and extemporalia. Free delivery. Correction of exercises. Four hours.
English. Syntax, with written and extempore exercises from Burkhardt. Reading of classic authors. Writing of letters. Exercises in speaking.
Arithmetic. Algebra. Simple and quadratic equations. Binomial and polynomial theorems. Higher equations. Commercial arithmetic continued. Three hours.
Geometry. Plane trigonometry and its applications. Conic sections. Descriptive Geometry. Three hours.
History. History of the middle ages. Modern history, with special reference to the progress of civilization, of inventions, discoveries, and of commerce and industry. Three hours.
Natural History. In summer, botany, the principal families, according to the natural system. In winter, zoology. The pupils are taken, for the purpose of examining specimens to the Royal Museum.
Physics. In summer, optics with experiments. In winter the system of the world. Three hours.
Technology. Chemical and mechanical arts and trades, described and illustrated by models. Excursions to visit the principal workshops. Four hours.
Architectural and machine drawing. Two hours. Those pupils who do not take part in this, receive lessons in ornamental drawing from plaster models.
Vocal Music. Two hours.
The pupils of this class are, besides, engaged in manipulating in the laboratory of the institution several hours each week.

The courses require a good collection of apparatus and specimens to carry them out, and this school is, in fact, better furnished than any other of its grade which I saw in Prussia, besides which, its collections are on the increase. The facilities for the courses are furnished by a collection of mathematical and physical apparatus, a labratory, with a tolerably complete chemical apparatus and series of tests, a collection of specimens of the arts and manufactures (or technological collection,) a collection of dried plants, and of engravings for the botanical course, and a small garden for the same use, a collection of minerals, a collection of insects, a collection in comparative anatomy, a series of engravings for the drawing course, and of plaster models, a set of maps, and other apparatus for geography, some astronomical instruments, and a library. The pupils are taken from time to time, to the admirable museum attached to the university of Berlin, for the examination of zoological specimens especially.

That this school is as a preparation for the higher occupations, and for professions not ranking among the learned, the equivalent of the gymnasium is clearly shown by the subjects and scope of its courses, and by the age of its pupils.

Some of these occupations require no higher instruction, others that the pupils shall pass to the special schools introductory to them. So also, many of the pupils of the gymnasia pass at once into active life, others enter the university.

The class of schools to which the two last described belong, are most important in their influence. In many countries, an elementary education is the limit beyond which those intending to enter the lower grades of the occupations enumerated in connection with the City Trade School of Berlin, do not pass; and if they are inclined to have a better education, or if intending to embrace a higher occupation, they desire to be better instructed, they must seek instruction in the classical schools. The training of these schools is, however, essentially different from that required by the tradesman and mechanic, the verbal character of the instruction is not calculated to produce the habits of mind in which he should be brought up, and the knowledge which is made the basis of mental training is not that which he has chiefly occasion to use. Besides, were the course ever so well adapted to his object, the time at which he must leave school only permits him to follow a part of it, and he is exposed to the serious evils which must flow from being, as it were, but half taught.

In fact, however, he requires a very different school, one in which the subjects of instruction are adapted to his destination, while they give him an adequate intellectual culture; where the character of the instruction will train him to the habits which must, in a very considerable degree, determine his future usefulness; and where the course which he pursues will be thorough, as far as it goes, and will have reached before he leaves the school the standard at which it aims. Such establishments are furnished by the real schools of Germany, and as the wants which gave rise to them there, are strongly felt every where, this class of institutions must spread extensively. In Germany they are, as has been seen, no new experiment, but have stood the test of experience, and with various modifications to adapt them to differences of circumstances or of views in education, they are spreading in that country. As they become more diffused, and have employed a greater number of minds in their organization, their plans will no doubt be more fully developed.

It is certainly highly creditable to Germany that its "gymnasia," on the one hand, and its "real schools" on the other, offer such excellent models of secondary instruction in its two departments. The toleration which allows these dissimilar establishments to grow up side by side, admitting that each, though good for its object, is not a substitute for the other, belongs to an enlightened state of sentiment in regard to education, and is worthy of the highest commendation.

DISTRIBUTION OF STUDIES IN THE CITY TRADE SCHOOL OF BERLIN.

SUBJECTS OF INSTRUCTION.	NO. OF HOURS PER WEEK.					
	First Class.	Second Class.	Upper Third Class.	Lower Third Class.	Fourth Class.	Total.
Religion,	1	2	2	2	2	9
German,	3	3	4	4	4	18
French,	4	4	4	4	4	20
English,	2	2				4
Arithmetic,	3	3	4	4	4	18
Geometry,	3	3	3	3	2	14
Geography,		2	2	2	2	8
History,	3	1				4
Natural History,	2	3	3	3	2	13
Physics,	3		2	2	2	9
Chemistry,		3	2	2		7
Technology,	4					4
Writing,			2	2	2	6
Drawing,	4	4	2	2	2	14
Vocal Music,	2	2	2	2	2	10
Total,	34	32	32	32	28	

In Prussia, every trade in which a want of skill may jeopard human life, is regulated by law; and before its exercise can be commenced, a license is required, to obtain which an examination must be passed. This requisition of the law is considered to involve a reciprocal obligation on the part of the government to afford the opportunity of obtaining the necessary knowledge, and schools have accordingly been established for the purpose. Twenty of the regencies of the kingdom already have technical schools established in them, where instruction is, in general, given at the expense of the state, or province, or for a very trifling remuneration; and it is the intention that each regency shall have at least one such school within its limits. When there is a burgher school in the place intended as the locality for one of these technical schools, the two schools are connected as already described: at Potsdam, the special technical course alone being given in a separate department. In all cases the government supplies the apparatus for the courses of mechanics, physics, and chemistry; furnishes the requisite engravings for the courses of drawing; and supplies works for the library and for instruction.

The most promising pupils from the provincial schools usually find places at the central Institute at Berlin, which is in fact the university of arts. There is a special school for ship-builders at Stettin, in Pomerania.

INSTITUTE OF ARTS OF BERLIN.

This institution is intended to impart the theoretical knowledge essential to improvement in the arts, and such practical knowledge as can be acquired to advantage in a school. It is supported by the government, and has also a legacy, to be expended in bursaries at the school, from Baron Von Seydlitz. The institution is under the charge of a director,* who has the entire control of the funds, of the admissions and dismissions, and the superintendence of the instruction. The professors and pupils do not reside in the establishment, so that the superintendence is confined to study hours. There are assistant professors, who prepare the lectures, and conduct a part of the exercises, in some cases reviewing the lessons of the professors with the pupils. Besides these officers there are others, who have charge of the admirable collections of the institution, and of the workshops, offices, &c. The number of professors is eight, and of repeaters, two. The discipline is of the most simple character, for no pupil is allowed to remain in connection with the institution unless his conduct and progress are satisfactory. There is but one punishment recognized, namely, dismission; and even a want of punctuality is visited thus severely.

In the spring of every year the regencies advertise that applications will be received for admission into the institute, and the testimonials of the candidates who present the best claims are forwarded to the director at Berlin, who decides finally upon the several nominations. The pupils from the provincial schools have, in general, the preference over other applicants. At the same time notice is given by the president of the Society for the Promotion of National Industry, in relation to the bursaries vacant upon the Seydlitz foundation. The qualifications essential to admission are—to read and write the German language with correctness and facility, and to be thoroughly acquainted with arithmetic in all its branches. The candidate must, besides, be at least seventeen years of age. Certain of the

* The director, M. Beuth, is also president of the Royal Technical Commission of Prussia, and has the distribution of the funds for the encouragement of industry, amounting to about seventy-five thousand dollars annually. M. Beuth is also a privy counsellor, and is president of the Society for the Encouragement of National Industry in Prussia.

pupils, as will be hereafter more fully stated, require to have served an apprenticeship to a trade. The Seydlitz bursar must, in addition, show—1st. That their parents were not artizans,* relatives of the founder having the preference over other applicants. 2d. That they have been apprenticed to a trade, if they intend to follow one not taught in the institution. 3d. They must enter into an engagement that if they leave the mechanical career they will pay back the amount of their bursaries. There are sixty or seventy gratuitous pupils in the school of whom eighteen are upon the Seydlitz foundation. Forty are admitted annually, this number having been adopted because it is found that, in the course of the first month, about a fourth of the newly admitted pupils fall away from the institution. Each bursar receives two hundred and twenty-five dollars per annum for maintenance. The education is gratuitous. The regular pupils enter on the first of October, but the director is authorized to admit, at his pleasure, applicants who do not desire to become bursars, but who support themselves, receiving gratuitously, however, the instruction afforded by the institution.

The education of the pupils is either solely theoretical, or combines theory and practice, according to the calling which they intend to follow. The first division is composed of students, who receive theoretical instruction only, and who are preparing to become masons, carpenters, and joiners. They are supposed to have become acquainted with the practice of their trade before entering the institution, being required to have served, previously, a part of their apprenticeship. An excellent reason is assigned for this rule, namely, that on leaving the school such pupils are too old to begin their apprenticeship to these callings, and would, if they attempted to do so, find the first beginnings so irksome as to induce them to seek other employments, and thus their special education would be lost, and the object of the school defeated. The second division embraces both theoretical and practical instruction, and consists of three classes. First, the stone-cutters, engravers, lapidaries, glass-cutters, carvers in wood and ivory, and brass-founders. Second, dyers and manufacturers of chemical products. Third, machine-makers and mechanicians. The practical instruction is different for each of these three classes.

The general course of studies last two years, and the pupils are divided into two corresponding classes. The first class is, besides, subdivided into two sections. The lower or second class is taught first; mechanical drawing, subdivided into decorative drawing, including designs for architectural ornaments, utensils, vases, patterns for weaving, &c., and linear drawing, applied to civil works, to handicrafts, and to machines. Second, modelling in clay, plaster, and wax. Third, practical arithmetic. Fourth, geometry. Fifth, natural philosophy. Sixth, chemistry. Seventh, technology, or a knowledge of the materials, processes, and products of the arts. The studies of the lower section of the first class are general, while those of the first section turn more particularly upon the applications of science to the arts. In the lower section, the drawing, modelling, natural philosophy, and chemistry, of the first year, are continued; and, in addition, descriptive geometry, trigonometry, stereometry, mixed mathematics, mineralogy, and the art of construction are studied. In the upper or first section, perspective, stone-cutting, carpentry, and mechanics applied to the arts, are taught, and the making of plans and estimates for buildings, workshops, manufactories, machines, &c. These are common to all pupils, whatever may be their future destination; but beside them, the machinists study, during the latter part of their stay at the institution, a continuation of the course of mechanics and mathematical analysis. The examples accompanying the instruction in regard to plans and estimates are adapted to the intended pursuits of the pupils.

The courses of practice are begun by the pupils already enumerated as taking part in them, at different periods of their stay in the institution. The future chemists and mechanics must have completed the whole range of studies above mentioned, as common to all the pupils, while the others begin their practice after having completed the first year's course. There are workshops for each class of pupils, where they are taught the practice of their proposed calling, under competent workmen. There are two foundries for bronze castings, one for small, the

* The object of M. Von Seydlitz appears to have been to counteract, to the extent of his power, the tendency to the increase of the learned professions, at the expense of the mechanic arts, by an inducement to a course exactly contrary to the usual one.

other for large castings, and the work turned out of both bears a high character. A specimen of this work is retained by the institution in a beautiful fountain, which ornaments one of the courts of the building. The models for castings are made in the establishment. In the first division of pupils, in reference to their callings, there are usually some whose art is connected with the fine arts in some of its branches, and these have an opportunity during part of the week to attend the courses of the Berlin Academy. The future chemists work for half the year in the laboratory. They are chiefly employed in chemical analysis, being furnished with the requisite materials for practice by the institution. In the shops for the instruction of mechanics are machines for working in wood and the metals, a steam-engine of four horses' power, a forge, tools in great variety, lathes, &c. The pupils have the use of all necessary implements, according to their progress, and are gradually taught, as if serving a regular apprenticeship. When capable, they are enable to construct machines which may be useful to them subsequently, as a lathe, or machine for cutting screws, or the teeth of wheels, &c., and are furnished with all the materials for the purpose, the machine becoming their own property. In these workshops, also, the models for the cabinet of the school are made. This is by far the most complete establishment for practice which I met with in any institution, and I believe the practice is both real and effectual. It involves, however, an expenditure which in other cases it has not been practicable to command. The scale of the whole institution is, in the particular of expenditure, most generous.

This is one specimen of the various plans which have been devised to give practical knewledge of an art in connection with theory in a school. It is first most judiciously laid down that certain trades can not be taught to advantage in a similar connection, but that the practical knowledge must be acquired by an apprenticeship antecedent to the theoretical studies. There are besides, however, a large number of trades, the practice of which is to be taught in the institution, and requiring a very considerable expenditure to carry out the design properly. This could not be attempted in a school less munificently endowed, and requires very strict regulations to carry it through even here. The habits of a school workshop are, in general, not those of a real manufactory, where the same articles are made to be sold as a source of profit; hence, though the practical knowledge may be acquired, the habits of work are not, and the mechanic may be well taught but not well trained. At the private school of Charonne, workshops were established, giving a variety of occupation to the pupils; but the disposition to play rather than to work, rendered these establishments too costly to be supported by a private institution, and the plan adopted instead of this, was to make the pupils enter a regular workshop for a stated number of hours, to work for the proprietor or lessee. This plan remedies one evil, but introduces another, that as the machinist takes orders, with a view to profit, the work may have so little variety as only to benefit a small class of the pupils. The pupils at Charonne are, however, under different circumstances from those at Berlin; they are generally younger, and, being independent of the school, where they pay for their education, are not under the same restraint as in the other institution; hence the experience of the one school does not apply in full force to the other. At Dresden, in a school somewhat similar to that of Berlin, a different mode from either of those just mentioned has been adopted. An arrangement is made with a number of mechanics, of different occupations, to receive pupils from the schools as apprentices, allowing them the privilege of attending, during certain specified hours of the day, upon the theoretical exercises of the institution. Where such an arrangement can be made, the results are unexceptionable, and the advantages likely to accrue to the mechanic arts, from the union of theory with practice, will offer a strong inducement to liberally disposed mechanics to take apprentices upon these terms. Small workshops, connected with an institution, must necessarily offer inferior advantages, even if closely regulated, so as to procure the greatest possible amount of work from the pupils; this should not be done for the sake of the profit, but to give him genuinely good habits.

The difficulties in giving practical instruction in the chemical arts are not to be compared with those under discussion, and will be found to have been satisfactorily obviated in several schools. This subject will receive its more appropriate discussion in connection with the polytechnic institution of Vienna, where the chemical

department, at least as far as manufacturing chemistry is concerned, is generally recognized as having produced the best results of any yet established.

Returning to the subject of the theoretical instruction in the Berlin institute of arts, the following statement will serve to show the succession of the course, with the time devoted to each:

WINTER COURSE.

MONDAY.

First Class. First division—drawing and sketching machines, eight A. M. to twelve o'clock. Discussion of machines, estimates of power, &c., two P. M. to five P. M. Second division—machine drawing, eight to ten. Modelling in clay, ten to twelve. Physics, two to five.

Second Class. Machine drawing, eight to ten. Modelling, ten to twelve. Elements of geometry, two to four. Repetition of the lecture, four to five.

TUESDAY.

First Class. First division—architectural plans and estimates, eight to twelve. Practical instruction in machinery, two to five. Second division—ornamental and architectural drawing, eight to twelve. Trigonometry, two to five.

Second Class. Ornamental and architectural drawing, eight to twelve. Physics, two to four. Repetition of the lecture, four to five.

WEDNESDAY.

First Class. First division—original designs, eight to twelve. Discussion of machinery. Second division—mineralogy, eight to nine. Machine drawing, nine to twelve. Trigonometry, two to five.

Second Class. Machine drawing, eight to twelve. Practical arithmetic, two to five.

THURSDAY.

First Class. First division—drawing and sketching machines, eight to twelve. Architectural instruction, estimates, two to five. Second division—decorative and architectural drawing, eight to ten. Modelling in clay, ten to twelve. Trigonometry, two to five.

Second Class. Decorative and architectural drawing, eight to ten. Modelling in clay, ten to twelve. Physics, two to four. Repetition of the lecture, four to five.

FRIDAY.

First Class. First division—architectural plans, eight to twelve. Practical instruction in machinery, two to five. Second division—machine drawing, eight to twelve. Physics, two to five.

Second Class. Machine drawing, eight to twelve. Elementary mathematics, two to four. Repetition of the lessons, four to five.

SATURDAY.

First Class. First division—perspective and stone-cutting, eight to twelve. Original designs, two to five. Second division—mineralogy, eight to nine. Decorative and architectural drawing, nine to twelve. Trigonometry, two to five.

Second Class. Decorative and architectural drawing, eight to twelve. Practical arithmetic, two to five.

The summer term, which follows this, embraces the practical instruction.

SUMMER TERM.

MONDAY.

First Class. First division—in the workshops from seven A. M. to twelve, and from one until seven P. M. Second division—machine drawing, eight to twelve. Applied mathematics, two to five.

Second Class. Machine drawing, eight to ten. Modelling, ten to twelve. Chemistry, two to four. Repetition, four to five.

TUESDAY.

First Class First division—analytical dynamics, eight to nine. Drawing of machines from original designs, nine to twelve. Machinery, two to five. Second division—decorative and architectural drawing, eight to twelve. Chemistry, two to five.

Second Class. Decorative and architectural drawing, eight to twelve. Elementary mathematics, two to four. Repetition, four to five.

WEDNESDAY.

First Class. First division—in the workshops from seven to twelve, and from one to seven. Second division—machine drawing, eight to ten. Modelling, ten to twelve. Applied mathematics, two to five.

Second Class. Machine drawing, eight to twelve. Practical arithmetic, two to four. Materials used in the arts, four to five.

THURSDAY.

First Class. First division—in the workshops from seven to twelve, and from one to seven. Second division—machine drawing, eight to ten. Modelling, ten to twelve. Applied mathematics, two to five.

Second Class. Decorative and architectural drawing, eight to ten. Modelling, ten to twelve. Chemistry, two to four. Repetition of the lesson, four to five.

FRIDAY.

First Class. First division—analytical dynamics, eight to nine. Drawing of a machine for an original design, nine to twelve. Machinery, two to five. Second division—chemistry, eight to nine. Applied mathematics, nine to twelve. Chemistry, two to five.

Second Class. Machine drawing, eight to twelve. Elementary mathematics, two to four. Repetition of the lesson, four to five.

SATURDAY.

First Class. First division—in the workshops, from seven to twelve, and from one to seven. Second division—decorative and architectural drawing, eight to twelve. Applied mathematics, two to five.

Second Class. Decorative and architectural drawing, eight to twelve. Practical arithmetic, two to four. Materials used in the arts, four to five.

The chemical division of the practical classes is engaged every day in the laboratory. On Tuesday and Wednesday, the library is open for reading from five to eight, P. M.

The collections for carrying out the various branches of instruction are upon the same liberal scale with the other parts of the institution. There is a library of works on architecture, mechanics, technology, the various arts, archeology, &c., in German, French and English. This library is open twice a week, from five to eight in the evening, to the pupils of the first class of the school, and to such mechanics as apply for the use of it.

There is a rich collection of drawings of new and useful machines, and of illustrations of the different courses, belonging to the institution. Among them is a splendid work, published under the direction of Mr. Beuth, entitled Models for Manufactures and Artisans, (Vorlegeblätter for Fabricanten and Handwerker,) containing engravings by the best artists of Germany, and some even from France and England, applicable to the different arts and to architecture and engineering. Among the drawings are many from original designs by Shenckel, of Berlin. There is a second useful but more ordinary series of engravings, on similar subjects, also executed for the use of the school. These works are distributed to the provincial trade schools, and presented to such of the mechanics of Prussia as have especially distinguished themselves in their vocations. The collection of models of machinery belonging to the school probably ranks next in extent and value to that at the Conservatory of Arts of Paris. It contains models of such machines as are not readily comprehended by drawings. Most of them are working models, and many were made in the workshops of the school. They are constructed, as far as possible, to a uniform scale, and the parts of the models are of the same materials as in the actual machine. There is an extensive collection of casts, consisting of copies of statues, basso-relievos, utensils, bronzes, and vases of the museums of Naples, Rome, and Florence, and of the British Museum, and of the models of architectural monuments of Greece, Rome, Pompeii, &c., and copies of models, cameos, and similar objects; those specimens only have been selected which are not in the collection of the Academy of Fine Arts of Berlin, to which the pupils of the Institute of Arts have access. There are good collections of physical and chemical apparatus, of minerals, of geological and technological specimens.

The instruction is afforded in part by the lectures of the professors, aided by text-books specially intended for the school, and in part by the interrogations of the professors and of the assistants and repeaters. At the close of the first year there is an examination to determine which of the pupils shall be permitted to go forward, and at the close of the second year to determine which shall receive the certificate of the institute. Although the pupils who come from the provinces are admitted to the first class of the institute, upon their presenting a testimonial that they have gone through the course of the provincial schools satisfactorily, it frequently happens that they are obliged to retire to the second, especially from defective knowledge of chemistry.

The cost of this school to the government is about twelve thousand dollars annually, exclusive of the amount expended upon the practical courses and upon the collections—a very trifling sum, if the good which it is calculated to do throughout the country is considered.

V. ELIHU YALE.*

Elihu Yale was descended from an ancient and wealthy family, which, for many generations, possessed the manor of Plas Grannow, and several other messuages of the yearly value of £500, near the city of Wrexham, the capital of Denbighshire, in North Wales.

His ancestry may be traced with certainty to David Yale, Esq., who, as early as 1613, was married to Ann, daughter of the Rev. Dr. Thomas Morton, Dean of Winchester, and afterward Bishop of Chester, Litchfield, and Coventry, and Durham, in England. David Yale died in 1617, leaving three children, David, Ann, and Thomas. In the following year his widow became the second wife of Hon. Theophilus Eaton, who, about twenty years afterward, embarked, in company with his family and the Rev. John Davenport, on board the Hector, for America, and arrived at Boston, Massachusetts, June 26, 1637, whence they removed, in the following year, to New Haven—then known as Quinnipiac—where they arrived April 15, 1638. Of this colony, Mr. Eaton was the first governor, and was annually elected to the same office till his death, January, 1657.

Thomas Yale, the youngest of the family, and father of Elihu—the subject of this sketch—with an estate of £100, settled as a merchant, and became one of the most prominent men in the colony. In 1645, he married Mary, daughter of Capt. Nathanael Turner, of New Haven. Here their third son, Elihu, was born April 5, 1648.

Soon after the death of Gov. Eaton, Mrs. Eaton returned to England, accompanied by her son, Thomas Yale, Esq., who took with him his son Elihu, then ten years of age, to be educated. In 1659, the year following, the father returned to America, where he died, March 27, 1683. His wife survived till October 15, 1704. Though retaining, as it would seem, an affectionate remembrance of his western home, it does not appear that their son Elihu ever returned to his native town. From his subsequent career we may infer that the twenty years succeeding his arrival in England were devoted to his education and such an acquaintance with business as was to prepare him for his future duties in mercantile and official life.

In or about the year 1678, he left England for the East Indies,

* Abridged from a memoir of Elihu Yale, in the "*Yale Miscellany for July*, 1858."

where, by his industry and enterprise, he amassed a princely fortune, and was made Governor of Fort St. George, (Madras,) on the coast of Coromandel. While here he also contracted marriage with a wealthy Indian lady, the widow of Governor Hinmers, his predecessor in office. By this marriage he had three daughters, Catharine, Anne, and Ursula, of whom the eldest, Catharine, married Dudley North, Esq., son of Sir Dudley North, who was the brother of Francis, Baron Guilford, Lord Keeper; the second, Anne, married Lord James Cavendish, third son of the first Duke of Devonshire, and the youngest, Ursula, died unmarried.

After a residence of twenty years in the Indies, Gov. Yale, at that time about fifty years of age, returned to England with his family, to enjoy the fruits of his diligence and success.* To such an extent had he won the confidence and esteem of those who knew him that, soon after his arrival, he was chosen Governor of the East India Company, and still later, about the beginning of the year 1718, as a further testimonial of the high consideration in which he was held, he was elected a Fellow of the Royal Society of London.

Various circumstances conspired to direct the attention of Gov. Yale to the cause of education in New England. It was the land of his birth and childhood; and in his native town, where the bones of his parents reposed, and where many of his relatives were still residing, a new college had just been established, and was struggling to maintain itself against the adverse fortunes of a new colony, which considerations were alone sufficient to move the sympathy of a nature far less susceptible than that of Gov. Yale. But still another influence operated perhaps more directly to effect this end. By the laws of England, the paternal estate being entailed to the eldest male heir

* Collins, in his "*Peerage of England*," says: "Elihu Yale, Esq., brought such quantities of goods from India, that, finding no house large enough to store them in, he had a public sale of the overplus, and that was 'the first auction in England.'" The following bill of sale was discovered in a copy of "The Evening Post," a newspaper issued at London several months after the governor's death, and bearing date "From Thursday, March 8, to Saturday, March 10, 1722."

THE LAST SALE FOR THIS SEASON.

"Being the most Valuable Part of the Collection of Elihu Yale, Esq., (late Governor of Fort St. George,) decea'd. Consisting of Jewels, (particularly that celebrated Diamond Ring, on which is cut the Arms of England and Scotland, formerly belonging to Mary Queen of Scots,) fine Diamond and Pearl Necklaces, Gold repeating and Silver Watches, and Clocks with several Motions, Chas'd, Philligrew, and Household Plate, with several Dozens of silver Plates, and some Dishes; a large Collection of valuable Pictures and Limnings, among which is the Capital Picture of the Samaritan Woman, by the famous Vander Werf; a fine India Skreen, with great Variety of India Cabinets, and divers Sorts of Household Goods; brass Cannons, curious Fire-Arms, Mathematical Instruments, fine Snuff Boxes, Swords, and Canes; several Parcels of fine Silks, Linens, Muslins, &c. With many valuable Curiosities in Gold, Silver, and Agate, will be expos'd to View, at his late Dwelling-house in Queen's Square, near Ormond-street, till the Time of Sale, which will begin on Thursday, the 8th of March, at 11 a-clock. Catalogues to be had only at the Place of Sale, and at Mr. Cock's, near the Vine Tavern, in Broad-street, near Golden Square, St. James's."

of the family, and Gov. Yale having no son, he sent to his brother, Mr. John Yale, of New Haven, requesting him to send one of his sons to inherit the estate.* Accordingly, in the year 1712, he sent his son, David Yale, to London, who, upon his return, received an honorary degree from Yale College, in the year 1724. "These things," says President Clap, "brought Gov. Yale into correspondence with the Hon. Governor Saltonstall and the Rev. Mr. Pierpont, of New Haven, which was the occasion of his generous donations." These donations, consisting for the most part of books and goods, and varying in amount, were made at sundry times from the year 1714, at which time he sent forty volumes of books in Mr. Dummer's collection, till the year of his death. About three years subsequent to the first, he sent above 300 volumes in addition, both of which parcels were estimated at £100. In the following summer he sent goods to the value of £200 at prime cost, together with the king's picture and arms,† and three years later he sent to the value of £100 more, which two collections were sold for an equivalent of £400, these donations amounting in all to five hundred pounds sterling.

The following extracts relating to these donations, are from letters addressed by Mr. Dummer to Gov. Saltonstall. Under date of London, March 12, 1717–18, he writes: "I am endeavoring to get you a present from Mr. Yale for the finishing your college, of which I shall write you more particularly in a little time."

After the long and bitter controversy in relation to the permanent locality of the institution, which resulted in its final establishment at New Haven, Mr. Dummer writes, April 14, 1719:—

I heartily congratulate you upon the happy union of the colony in fixing the college at New Haven, after some differences, which might have been attended with ill consequences.

Mr. Yale is very much rejoiced at this good news; and more than a little pleased with his being patron of such a seat of the Muses; saying that he expressed at first some kind of concern whether it was well in him, being a Churchman, to promote an academy of Dissenters. But when he had discoursed the point freely, he appeared convinced that the business of good men is to spread religion and learning among mankind, without being too fondly attached to particular tenets, about which the world never was, nor ever will be agreed. Besides, if the discipline of the Church of England be most agreeable to Scripture

* Mr. Jeremiah Dummer, Jun., agent in London for the colony of Connecticut, writes to Rev. Mr. Pierpont, of New Haven, dated 22d May, 1711, as follows:—"Here is Mr. Yale, formerly Governor of Fort George, in the Indies, who has got a prodigious estate, and now, by Mr. Dixwell, sends for a relation of his from Connecticut, to make him his heir, having no son. He told me lately that he intended to bestow a charity upon some college in Oxford, under certain restrictions which he mentioned. But I think he should much rather do it to your college, seeing he is a New England and, I think, a Connecticut man. If, therefore, when his kinsman comes over, you will write him a proper letter on the subject, I will take care to press it home.

† Charles I., by Sir Godfrey Kneller, now deposited in the South room of the Trumbull Gallery. Some overzealous patriot destroyed the king's arms during the Revolution.

and primitive practice, there's no better way to make men sensible of it, than by giving them good learning.

Mr. Yale's picture* at full length, with his nephew's on the same canvas, is drawn for a present to your college hall, and he'll send you, by the same conveyance, another parcel of books, part of which he has promised me shall be the Royal Transactions, in 17 volumes. He proposed sending you a pair of globes; but when I told him you had two pair already, we agreed that in lieu of them you shall have some mathematical instruments and glasses, for making philosophical experiments, as microscopes, telescopes, and other glasses for use, as well as for ornament and curiosity.

I have some books and other things for you of my own collection, which I'll either put up separately or pack them with what Mr. Yale sends.

The following, dated Feb. 25, 1720, (1721,) probably refers to the last of his donations noticed in the list above:—

Mr. Yale has shipped a hundred pounds sterling in goods for your college. This, however, is but half what Mr. Yale promised me a month ago, when he assured me he would remit you £200 sterling per annum during his life, and make a settled annual provision to take place after his death. But old gentlemen are forgetful. I was with him last night, to refresh his memory about the books, pictures, and other presents, which I formerly mentioned to you, and to see if they could be ready to go with the goods, but it seems they won't be in order 'till a month hence. I shall be glad if they are ready then.

By the munificence of Governor Yale, the trustees of the new college were enabled, soon after receiving his second donation, to complete a large and commodious edifice,† which, in honor of this distinguished benefactor, they named Yale College,‡ and entered upon record a memorial thereof in Latin, of which the following is a translation:—

The Trustees of the Collegiate School, constituted in the splendid Town of New Haven, in Connecticut, being enabled, by the most Generous Donation of the Honorable *Elihu Yale*, Esq., to finish the College House, already begun and erected, gratefully considering the Honour due to such and so great a Benefactor and Patron, and being desirous, in the best Manner, to perpetuate to all Ages the Memory of so great a Benefit, conferred chiefly on this Colony: We, the Trustees, having the honour of being instrusted with an Affair of so great Importance to the common good of the people, especially of this Province, do with one Consent agree, determine, and ordain, that our College House shall be called by the Name of its Munificent Patron, and shall be named YALE COLLEGE: that their province may keep and preserve a lasting Monument of such a Generous Gentleman, who, by so great a Benevolence and Generosity, has provided for their greatest Good, and the peculiar Advantage of the Inhabitants, both in the present and future Ages.

This occurred on the occasion of the first public commencement held in New Haven, September, 10, 1718, "where were present," in the language of President Clap, "besides the Trustees, the Honorable

*This picture was unfortunately never received; and probably nothing in this collection ever reached the college.

†This structure stood on the south-east corner of the present College Green, fronting College street. It was constructed of wood, one hundred and seventy feet long, twenty-two feet wide, and three stories high; containing nearly fifty studies, besides the Hall, Library, and Kitchen, and cost about £1000 sterling. It was raised October 8, 1717, and completed in the following year. It was demolished in October, 1782; a part having been pulled down six or seven years before.

‡This name, though originally applied to the first "College House," was used indiscriminately to designate this and the Collegiate School, until, by the charter of 1745, it was applied to the corporate body.

Gurdon Saltonstall, Esq., Governor of the Colony of Connecticut; the Honorable William Taylor, Esq., as representing Governor Yale; the Honorable Nathan Gold, Esq., Deputy Governor; sundry of the worshipful Assistants; the Judges of the Circuit; a great number of reverend Ministers; and a great concourse of spectators."

On this same occasion the Trustees sent to Gov. Yale a letter of thanks, of which the following is an exact transcript:—

HONOURABLE SIR:

The Trustees of the Collegiate School of Connecticutt, fixed in the Ancient famous Town of New Haven, have Convened on our Academical Solemnities, where we have had the Honour done us of Seeing the names of the famous Books sent us from y^r^ Hon^r^ appearing in the Catalogue of the Books of the Noble Spirited Benefactors of our School, and of Knowing your most Generous Bounty of a Large Quantity of very agreeable Goods, together with a further Ornament of choice Books, his Majesties Picture and arms are safely Arived at Boston, and had the Happiness of the Hon^bl^e^ Coll. Taylor, Representing y^r^ Hono^r^, Gracing the Solemnities of our Commecem^t^. In whose presence a great number of Learned men and y^e^ fautors of Learning attending, we the Trustees in the Large and Splendid Hall of our Building, Have done our School the Honour of naming it with your Illustrious name and have called it Yale-Colledge, and read off a Memorial of it in the Lattin Tongue, And also a Memorial of the Same in the English Tongue, answered with a Counterpart in Lattin, which Coll. Taylor was pleased to say was very agreeable to him representing y^r^ Hono^r^. From the Hall the Schollars in the way usual walked to the meeting house, where in the presence of the Hon^bl^e^ Gov^r^ Saltonstall and his Generous Lady, the Hon^bl^e^ Coll. Taylor representing your Person, the Hon^bl^e^ Deputy Govern^r^ Gold, with sundry worshipful Assistants, the Judges of the Circuit, a Great numb^r^ of Rev^d^ Ministers, and Learned men and of a great frequency, your Hon'rs bounty hath been opened with the great gratitude by the Saluting Orator, and after the Disputations were well performed, in an oration managed by one of our Body, hath been proclaimed the wonderful Goodness of a most Bountiful God, and the Benefits of Liberal Donors, and in a Distinguishing Degree the admirable Munificence of your Hon^r^ with warmest Prayers to the God of all grace to inrich your Hono^r^ more and more with all Spiritual Blessings; and that after the long Continuance of a publick blessing so rich in Good works, a multitude, who have been Satisfied with your beneficences, may receive their Generous Benefactor into Everlasting Tabernacles. Immediately after which ten Deserving proficients received their Degrees, which being given, our Hon^bl^e^ Governor Saltonstall was pleased in a famous Latin Speech to do us the Hon^r^ of Crowning the Solemnities of the Day, Extolling with profound respect your Hon^bl^e^ name. The Solemnities being perfected, in Colledge Order from the meeting-house we returned to Yale-Colledge Hall and Library, wherein were Generously entertained with a large Colledge Dinner a vast number, in the Library y^r^ Hon^bl^e^ Representative the Hon^bl^e^ Ingenuous and Generous Coll. Taylor, was pleased to seat himself at the Table of the Ladies. The Day hath with Divine countenance, been carried on in a Splendid manner. We rejoyce in the Goodness of Almighty GOD, who hath provided for our School so honourable a protection, and revived our Hopes that so great and Glorious a work, for the Hon^r^ of Almighty GOD, for the Service of Religion and Learning, for the Ornament and Weal of our Colony, and in particular for the accomplishment of many your worthy Relations, may, under your great name, flourish and increase in Glory. As we offer

humble and hearty Thanks to y^r Hon^r for your many bounties, so we are and shall be Constant Solicitors at the Throne of Grace, that your Abundant Charity and Liberality flowing from your Pious Breast may be found to the making very weighty your Crown of Glory to be received from the hands of adorably free grace in the Day of our Lord Jesus: and we humbly desire Leave to do our Selves the Hon^r of Subscribing

Hon^bl^e Sir, Your Hon^r's most obliged,

Most Thankful, And most obedient Servants,

James Noyes, Samuel Andrew, Samuel Russel, Joseph Webb, Joh. Davenport, Thomas Ruggles, Stephen Buckingham.

New-Haven, Sept. 12, 1718.

The Hon^bl^e Elihu Yale.

Governor Yale died at London, on the 8th, and was buried at Wrexham, on the 22d of July, 1721. The monument having become worn and defaced by time, was repaired in the year 1820, and the original inscription recut, with modifications and additions. This monument, situated in the church yard of St. Giles, Wrexham, was visited in June, 1857, by Professor Edward E. Salisbury, of New Haven, who copied the following inscriptions:—

On the east end:—

In the year of our Lord
MDCCCXX
this tomb underwent a general repair by the
Parish
to perpetuate the memory
of him who so liberally
contributed to the
improvement of the Church.

On the south side:—

M. S.
Elihu Yale Esqr
was buried the twenty-second of July
in the year of our Lord
MDCCXXI

On the north side:—

Born in America, in Europe bred,
In Afric travell'd, and in Asia wed,
Where long he liv'd and thriv'd; in London dead.
Much good, some ill he did, so hope all's even,
And that his soul through Mercy's gone to Heaven.
You that survive and read this tale take care
For this most certain exit to prepare,
Where blest in peace the actions of the just
Smell sweet and blossom in the silent dust.*

There is, at present, in the possession of Yale College, an original full length portrait of the Governor, which, on the application of President Stiles, through Samuel Broome, Esq., of London, was presented to the college in 1789, by the grandson of Catharine Yale, Dudley North, Esq., member of Parliament for Great Grimsby, and at that time owner of the family seat of the Norths, at Glemham, in Suffolk, England. From a date on the canvas, the portrait appears

* The last two lines of this epitaph will be recognized as a quotation from that noble dirge by Shirley, opening with,—

"The glories of our blood and state
Are shadows, not substantial things."

to have been executed by E. Seeman, 1717, about four years before the Governor's death.

There was an engraved likeness of Gov. Yale sent to the college at an early period, under which was placed, in manuscript, the following inscription:—

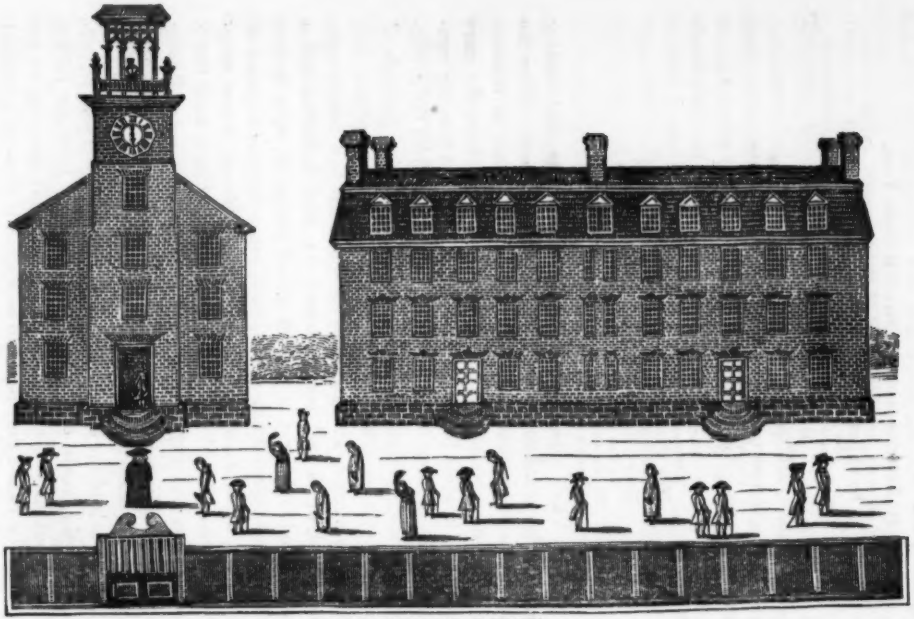
EFFIGIES CLARISSIMI VIRI D. D. ELIHU YALE,
LONDINENSIS ARMIGERI.

En vir! cui meritas laudes ob facta per orbis
Extremos fines, inclyta fama dedit.
Æquor arans tumidum, gazas adduxit ab Indis,
Quas Ille sparsit munificante manu:
Inscitiæ tenebras, ut noctis luce corrusca
Phœbus, ab occiduis pellit et Ille plagis.
Dum mens grata manet momen laudesque YALENSES
Cantabunt SOBOLES, unanimique PATRES.

Which has been thus imitated by Dr. Percival:—

Behold the man for generous deeds renown'd,
Who in remotest regions won his fame;
With wise munificence he scatter'd round
The wealth that o'er the sea from India came.
From western realms he bids dark ignorance fly,
As flies the night before the dawning rays:
So long as grateful bosoms beat, shall high
YALE's sons and pious fathers sing his praise.

Of Gov. Yale's *generosity*, which seems to be the most striking feature of his character, it would be superfluous to speak. Were the memorable endowment, which will transmit his name to remotest ages, the only instance that is recorded of his benevolence, the mere mention of it would be eulogy enough. But it is not from the number nor the amount of his gratuities, so much as from the circumstances attending them, that he is entitled to the lasting gratitude of posterity. He gave, not to the Yale College of the present day, claimed by a nation and known to the world, but to a humble colonial school, which had hardly secured "a local habitation and a name;" and to this, not in the full tide of prosperity, when its benediction could give eclat to the bestowal, but in the critical period of its history, when, amid the discouragement of friends, it was struggling between life and death. It was enough for him to know that a worthy cause was suffering for aid, and, in conscientiously following the dictates of a generous nature, regardless of personal considerations, he has unconsciously secured to himself that immortality for which myriads of the selfishly ambitious have lived and died in vain. Verily, in the words of his own family motto, "Premium virtutis *Gloria*," but this noble act teaches a higher lesson; and may we not hope that its richest fruit is yet to be realized in those who, inspired by this illustrious example of benevolence, shall "cast their bread upon the waters," to be found by coming generations? If there is any thing in the consciousness of duty performed, of happiness conferred, or of gratitude received, to move the heart of benevolence and humanity, the "name and praises" of Elihu Yale should be a standing exhortation for all coming time, to "go and do likewise."



YALE COLLEGE IN 1764.

The following eloquent passages, being the conclusion of the "*Address delivered before the Society of the Alumni of Yale College, July* 28, 1858, *by* F. A. P. Barnard, LL.D., *Chancellor of the State University of Mississippi*," presents in a striking light the influence of Yale College, through her annual contribution to the educated mind of the country.

"In conclusion, my thoughts revert to the point from which they started, to this venerable institution, which has contributed so abundantly to the creation of the influential class, whose high responsibilities I have been endeavoring to enforce. Hardly a seminary of learning in the country can boast a larger list of living alumni than this. Probably not one can justly claim to have done more, through her sons, for the enlightenment of the world, for the advancement of religion and morality, and for the encouragement of every species of philanthropic effort. Among your number, my brethren, are doubtless many, for whom, as for myself, the priceless teachings which we here enjoyed constituted the sole patrimony with which you entered upon life. Among you are many whose lives, like my own, have been devoted to the endeavor to transmit to others, according to your ability, the benefits which you here received. Such antecedents are peculiarly adapted to quicken our appreciation to-day, of the powerfully salutary influence which the mighty stream of cultivated intellect, ever here flowing forth into the world's great ocean, carries with it into the social life, and exercises over the public sentiment of its time. In the contemplation of this unceasing efflux, there is something deeply impressive, singularly beautiful, almost sublime. And when, after years of drifting over the face of the great deep, sometimes in cloud and tempest, sometimes in sunshine and calm, sometimes cheered by the companionship of congenial natures, and sometimes isolated amid a dreary waste of unsympathizing humanity, we come back here at last, and behold the mighty stream still flowing on, it is this unfailing constancy which, among a thousand exciting associations, most forcibly arrests our attention, and we almost forget to magnify the beneficence of the stream, in our admiration of its steadiness. We too were drops in this stream. To ourselves we may have seemed to form no insignificant portion of its volume. It swept us out into the wide ocean, and remained no less full than before. How is it, we involuntarily inquire, that a supply so unceasing is maintained? And as the imagination follows up the similitude just presented, of the river in its relation to the ocean, we discover in it an analogy which at once illustrates and pleases. For when we look for the hidden sources of supply by which the natural streams are fed, we find them in many peaceful little fountains, lurking in quiet and secluded retreats, and embosomed in the herbage which their own sweet waters cherish, fountains over which the graceful willows lean lovingly, around whose brim the mosses and the wild flowers gather, and into whose crystal wells the bolder rushes step confidingly, and bathe their shining feet;—fountains which,

as they sparkle amid the foliage, seem like the eyes of earth peering, through her tresses, into the blue heaven above, and giving back from their serene depths the counterpart of its calm tranquillity. And so, when we seek here to know whence come the many young and animated faces, which, in ceaseless succession, appear to take the place of others which the educational stream has swept onward into the world, we shall trace them in like manner to the quiet homes of the people, embosomed it may be, like the fountains, in rural retirements; like them, perhaps, diffusing beauty all around them; like them, to outward seeming, clothed in loveliness; and like them, too, wearing heaven's own serenity within.

Will you pardon me, if I pursue, for a moment, an analogy illustrative of its subject in more aspects than one. In the great ocean, toward which the river tends, the waters however seemingly pure, are charged with many things bitter and noxious, foreign, indeed, to their nature, but yet too intimately blended with them to be separated. Yet in those gem-like fountains, where those same waters first bubbled sparklingly up, the delicate water-lily, purest and sweetest of flowers, laid her cheek lovingly upon their bosom, unharmed; and the silver trout, which shuns by instinct every trace of impurity, frolicked in the ripples which glittered along their ribbon-like outlets. Such too is the contrast between the great world, with its moral contamination, and the happy and beautiful innocence of childhood at home. When inexorable time, and the unpausing stream of life, sweeps us at length from beneath the sheltering banks, which lent protection and tranquillity to the still current of our educational career, among all the unanticipated revelations which opening life brings with it, none surprises us sooner or affects us more painfully, than that which tells us how much wickedness and crime the world contains. And though I would not insist on the similitude so far as to say, that as the sweet waters of the discharging streams are forced to appropriate their equal proportion of the nauseous ingredients which vitiate the purity of ocean, even so each innocent spirit which mingles in the great flood of life must share in like degree in the general contamination, still it is too probably and painfully true that no human being who lives, however excellent or watchful or prayerful or pious he may be, succeeds in keeping himself altogether and absolutely unspotted from the world.

There is another particular in which the ocean, in its contrast with its sources of supply, presents a parallel to the life of man in youth and maturer age. Among the features which enchant in the aspect of the secluded fountains, none is more impressive or pleasing than their sweet repose. But an agitation so unceasing disturbs the stillness of the mighty deep, that the ocean has become the most proverbial of all the types of restlessness. Though every wind be hushed to rest, and every visible cause of disturbance cease to operate, yet does not quiet any the more return to the vexed abyss. For there are causes, which the eye fails to detect, pervading all its secret and impenetrable depths, and forbidding tranquillity ever more to reign in the bosom of the vast profound. A temperature ever fluctuating generates mighty currents, which hurl the

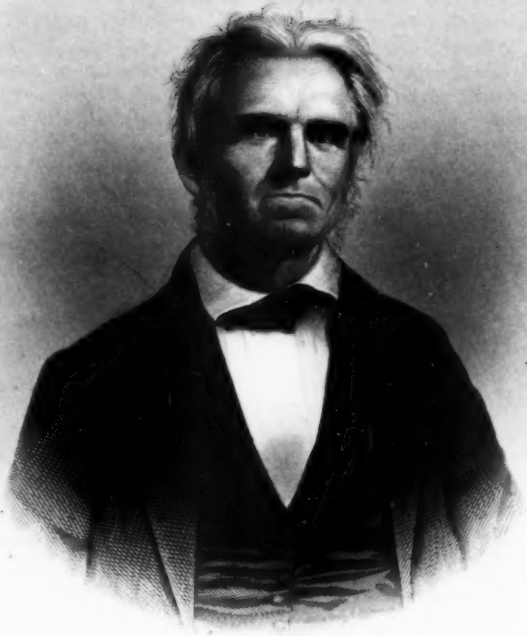
impetuous waters with headlong violence against their continental barriers, where they dash their crests against the rocks, or roar out their rage upon the sands forever. And even thus, in the great ocean of humanity, the heats of passion are perpetually stimulating disturbances, which whirl multitudes insanely on to break their strength upon insurmountable obstacles, and fill the world with unfortunate and bootless clamor. In like manner, also, as the heaving tide-wave lifts itself as if with earnest effort upward, and struggles as it were to follow the distant and retreating moon, so too that craving nature, which finds nothing palpable on earth to satisfy its aspirations, still restlessly and vainly strives to reach the imaginary and the unattainable.

Now any one who may have observed what happens wherever any great stream, descending from the land, pours out its gathered waters into the bosom of this agitated and restless or angry deep, must have marked how the purer waters rise at once to the surface, and spread themselves out in a vast stratum, distinguished from that which it overlies no less by its superior buoyancy than by its superior freshness. And precisely thus does the great tide of cultivated intellect, outflowing from our seminaries of higher learning, tend naturally and resistlessly upward; assuming as its rightful and fitting position a level of positive superiority over surrounding ignorance, enabling it to command the respect, and to a great degree to master the prejudices and passions, and to control the actions of men: a position of moral power from which it can no more be thrust downward, than, reversing the laws which govern the material world, the river can be made to flow beneath the sea.

A single further point of resemblance only need be suggested, to render the analogy complete. The waters of the countless tributaries which seek the ocean are not destined to make that vast and troubled reservoir of bitterness their perpetual abiding place; nor does the great flood itself, notwithstanding the unceasing accessions to its volume, grow ever any the more full; for over all its extended surface there is going forward constantly a process of silent exhaustion, to which, transformed by the mysterious influence of the solar radiance, the dense fluid lays aside its gross and palpable properties, and, gifted with viewless wings, bursts from the embrace of its impurities, and soars away spirit-like to heaven. Nor shall it be ours forever to remain stagnant and sullied drops in the great ocean of mortality; but, in the great change which awaits us all, we shall surely pass away and disappear, and as whatever is material of our bodies shall dissolve, we may, if we will, along with our perishing frames, put off all the stains which earth has inwrought into our immortal natures, and, purified by the renovating rays of the Sun of Righteousness, be lifted to a higher than this visible heaven—that heaven of celestial splendors, illuminated by God's own presence, which sorrow never enters nor sin defiles.

Then, my brothers, shall we at last be able fully to comprehend the end and purpose of all our education in this little life of earth. Then shall the powers of intellect, awakened and expanded and strengthened by

laborious culture here, address themselves, with a fullness of satisfaction which it has never yet entered into the heart of man to conceive, to the contemplation and study and enjoyment, in all their profundities of mystery, of the infinitely varied manifestations of the power and wisdom and goodness of God. Then, too, shall that moral discipline, which forms so severe a portion of our present trials, bring forth the fruits which it was designed to produce; and the victor, at last triumphant in the world's exhausting conflicts with sin and temptation, shall be crowned with a crown of rejoicing and welcomed to an inheritance incorruptible, undefiled, and which fadeth not away. Then, at length, shall the work of education cease—a work which, in its very nature, implies a state of slumbering intellectual life, and of undeveloped faculties of judgment and reasoning and reflection; and then shall all created intelligences become learners together, advancing perpetually from enjoyment to enjoyment, as they rise from knowledge to knowledge, with eternity only to limit the expansion of their powers or the enlargement of their attainments; and with God himself, in all the infinity of his perfections, for the exhaustless subject of their adoring study."



Very Respectfully yours

Saml. D. Lewis

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VI. SAMUEL LEWIS.

BY WILLIAM T. COGGESHALL,

Editor of the Ohio Journal of Education.

Samuel Lewis, the first superintendent of common schools in Ohio, and the most efficient promoter of a system of public instruction in that state, was born at Falmouth, Massachusetts, March 17th, 1799. His ancestors, on his mother's side, were of the original pilgrim stock, at Plymouth. His father was a sea-faring man—the captain of a coasting vessel; and Samuel, when not more than eleven years of age, was often a cabin-boy on voyages which involved perilous exposure. His opportunities of education were limited, even under the circumstances in which his boyhood was passed; but he early manifested a thirst for knowledge, and he was an upright, reflecting boy. At the age of ten years, he was a member of the Methodist church, and before he was twelve years old gave evidence of those persuasive powers by which he was afterward distinguished as a public advocate.

His father, having met heavy losses at sea, determined to emigrate to the West. In the year 1813, the family, consisting of father, mother, and nine children, journeyed from Falmouth, Massachusetts, to Pittsburg, Pennsylvania, with one wagon, drawn by two horses; the father and his five sons walking the entire distance. At Pittsburg a small flat-boat was purchased, from which, after a tedious voyage down the Ohio river, Mr. Lewis landed his family at Cincinnati. He immediately settled upon a farm near that city, and when Samuel was fifteen years of age, hired him out to work on a farm, at seven dollars a month. The boy's employer was a mail contractor, and very soon Samuel was the mail carrier between Cincinnati and Chilicothe. He traveled on horseback. The trip occupied seven days, and sometimes two nights, amid perils arising in the new country from high water, imperfect roads, and forest rangers of various classes. A better opportunity offering to him, young Lewis went, with a party of surveyors, into Indiana. He spent several months in the forest, and then, having determined to learn a trade, hired himself to a carpenter, and applied his energies diligently to the study and practice of the art of house-building. He was industrious, tem-

perate, and skillful, and became a respected workman. From the time he was a farm-boy, until he worked as a journeyman carpenter, he continued, as regularly as his laborious duties would permit, to read whatever books of good character he could obtain, devoting the time which too many of his fellow workmen spent in idleness and dissipation, to study, which fitted him the better for his mechanical labors, and which won the respect of all who formed his acquaintance. Thirst for knowledge, and desire for the influence which its acquaintance and good use imparts, led Mr. Lewis to seek a wider sphere of activity; and, in the year 1819, he resolved to study law. He was then twenty years of age. He had paid his father fifty dollars a year for five years, for his time; and had one year yet to work in before attaining his majority. His good character, and available intelligence, secured him a place in the clerk's office of the court of common pleas of Hamilton county. His salary was thirty dollars a year and his board. Judge Jacob Burnet consented to become his legal instructor, and he made an arrangement with his employer, the county clerk, by which he was to be allowed to board himself, and to receive, for so doing, one hundred and twenty dollars a year. His income was, then, one hundred and fifty dollars, out of which he was to pay his father fifty; and, with the remainder, board and clothe himself, and buy the books he wanted, which he could not borrow. His diet was, literally, bread and water; his clothing, the cheapest he could purchase. He was obliged to work all day at his desk in the clerk's office, and had only the night time for his law studies; yet, on the second of April, 1822, he was admitted to the bar, after an examination which gave him favor with several influential lawyers. His industry, frugality, temperance, and probity, were known to men who had business before the Hamilton county courts, and Mr. Lewis immediately secured a remunerative practice. He soon became distinguished as an advocate, and he maintained a respectable position as a counselor.

Out of the first proceeds of his efforts at the bar, Mr. Lewis bought a farm for his father, and contributed money for the education of his younger brothers and sisters. As his business increased, and his income augmented, he improved his father's farm. In 1823, he married Charlotte E. Goforth, a daughter of an eminent physician, a pioneer in the Miami valley. In 1824, Mr. Lewis was licensed as a local preacher. He was then well known as an earnest advocate of temperance reform, and was relied upon by the advocates of popular education as a powerful coadjutor. His first influential action for general education, was exerted with a friend, who, being disposed to be-

queath a fund for the maintenance of a free grammar school, was induced by Mr. Lewis, not to postpone the establishment of the school; but, while yet in active life, to set apart property for that purpose. That friend was William Woodward. The school was opened in 1830, three years before Mr. Woodward died. Mr. Lewis was appointed a life trustee, with power to nominate his successor. The property is now worth at least $250,000; and, with another fund, known as the Hughes Fund, amounting to not less than $60,000, of which Mr. Lewis was also a trustee, supports two high schools in Cincinnati, which, chiefly through the foresight of Samuel Lewis, are the crowning features of the common school system of that city.

Mr. Lewis was one of the earliest and most active supporters of the Western College of Teachers, which was formed in 1831. In addresses before that body, and in an address at the first state convention, 1836, he had not only displayed power to plead eloquently for popular education, but he presented views which exhibited judicious reflection upon the instrumentalities by which common schools were to be rendered popular and efficient; and, in the winter of 1837, he was elected, by the legislature, superintendent of common schools.

Mr. Lewis knew that heavy pecuniary and personal sacrifices would be required of him, if he accepted the office, but he did not hesitate. Pecuniary interest never deterred him from the straightforward discharge of a plain duty, nor did the allurements of immediate prosperity ever deter him from the frank expression of what he conceived to be important truths; but he expressed honest fears that, owing to the want of early education, which had often embarrassed him, he would not be competent for the responsibilities to which he was invited. Friends, who knew him well, assured him that these misgivings arose from a too severe estimate of the duties he would be required to discharge. Taking their counsel, he accepted the office. He brought to the position not only zeal and practical knowledge, but a capacity for work imperatively needed; capacity to travel and to speak, for which the toils of his early, and the experience of his later, life had peculiarly qualified him. He began his work in the spring of 1837. The salary which had been voted the superintendent was five hundred dollars a year.

Mr. Lewis found that, excepting Cincinnati, there were no schools in the state practically open alike to rich and poor. There were 7,748 districts, and 3,370, nearly one-half, were without school-houses. Many of the houses, in which a school was taught for two or three months in winter, were not worth ten dollars each; while not one third in the state would be appraised at fifty dollars each. He trav-

eled more than twelve hundred miles, chiefly on horseback; visited forty county towns, and three hundred schools; urging upon school officers augmented interest, upon parents more liberal and more active co-operation, and upon teachers a higher standard of morals and of qualifications, with an eloquence remarkable for persuasive power. He reported to the legislature of 1837 and 1838, that there had been four thousand three hundred and thirty-six schools taught, on an average, about three months in the year; that four-fifths of the people were in favor of free schools, but demanded that they should be efficient. By invitation, he read his report to the general assembly, and he told its members that where the schools were free (in Cincinnati,) they flourished best; but the towns generally had poorer public schools than the country, because the common schools were not so much depended upon. To overcome the difficulties which prevented the general enjoyment of free education, Mr. Lewis recommended a state fund, to be equally distributed; better economy in the administration of school laws; the privilege of loans for building school-houses; the establishment of school libraries; the publication of a school journal; and proper care of the lands given in trust to the legislature for the support of free schools.

Certain features of Mr. Lewis' report, ought to be held in grateful remembrance. He desired that school-teachers should be required to report to township clerks. In 1835, the state auditor had been requested to inform the legislature of the number of schools in the state, and the number of white youth attending them. He was authorized to call upon county auditors for the information. Only thirty-three out of seventy-one counties responded. No county in the state reported fully. In 1837, Mr. Lewis advocated also the propriety of arranging districts and schools in corporate towns and cities, under one board of education, with power to hold evening schools; and he thought it would save special legislation, to pass a general law, giving townships a right to organize high schools or seminaries, whenever they demanded a higher grade of instruction than could be secured in district schools. Again, he saw no reason why orphan asylums should not be allowed something toward the education of the youth under their charge; and he was in favor of a superintendent of common schools in every county.

The report, embodying these far-seeing suggestions, was made to a general assembly distinguished for ability. Its leading men have since filled important state and national offices. In the senate, were Benjamin F. Wade, David Starkweather, and Leicester King; in the house, John A Foot, Seabury Ford, James J. Farran, Otway Curry,

Alfred Kelley, William Medill, W. B. Thrall, W. Trevitt, and Nelson Barrere.

The superintendent's suggestions were respectfully considered; and the committee on schools, stimulated by his assiduous attentions, and guided by his experience, prepared a bill, which Mr. Van Hook, from Butler county, presented to the house, on the 5th of February, 1838. Without essential change, though opposed with determination, it passed that body, by a majority of twenty-six. In the senate, frequent attempts were made to change its practical character, or postpone final action upon it; but, on the 3rd of March, the final vote gave it seven majority; and, by the concurrence of the house in slight amendments which the senate had imposed, it became a law the same day.

It created a school fund of $200,000, to be distributed equally throughout the state; imposed a county tax of two mills; provided local school officers; made county auditors and township clerks; county and township superintendents; authorized district taxes for school-houses; required reports from teachers, and from township and county superintendents; gave incorporated towns and cities a board of education, with power to establish schools of a higher grade than was common; required county examiners; made the office of state superintendent permanent—the officer to be elected every five years, and have a salary of twelve hundred dollars, and to be the editor of a monthly journal, published at the expense of the state, and circulated among school officers and teachers.

Mr. Lewis promptly prepared to exercise his faculties to their fullest capacity in securing attention to, and execution of, the new law. His report had been favorably received by the people, and the prospect was fair for the practical working of the school system as revised. The first number of the "*Common School Director*" was issued by the superintendent, in May, 1838. He announced that it was his intention to visit every county of the state. His appointments were immediately arranged and published, and he urged school-teachers, school officers, and friends of education to meet him; declaring that nothing but sickness or death would prevent him from fulfilling his engagements. Thus, in addition to his regular labors as editor and general school director, he assumed an enormous task—one which required him to ride, day after day, on horseback, thirty-five and, sometimes, forty miles. Whether Mr. Lewis met any stirring or romantic adventures in his wild rides, I can not say; but I know that he was almost every where encouraged with evidences of a growing interest in schools; and, by his private advice, public appeals, and

familiar arguments, he gave a vigor to educational sentiment which found expression in county educational conventions; increased the number of teachers' associations; and secured a representation at a state educational convention, in Columbus, in December, 1838, which most positively declared that the cause of popular education was gaining decided triumphs. In April, 1838, an educational paper had been started in Akron, Ohio, by E. L. Sawtell and H. K. Smith, called the "*Pestalozzian.*" It seconded Mr. Lewis' appeals in the "*Common School Director,*" in behalf of the state convention, and was of important service. I have seen a call for a state convention in 1837, but can find no report of a meeting. The meeting in 1838 was attended by nearly one hundred delegates. Wilson Shannon, then governor, was elected president, and Milo G. Williams, first vice-president.

In the "*School Director*" for November, Mr. Lewis had made an especial appeal to school-teachers. He said reading was attempted to be taught in all the schools, but arithmetic was not, in many, and that, with geography, it ought to be in all; while history, and the elements of chemistry and philosophy, ought not to be neglected. Grammar had not yet become a branch of *common* school instruction; therefore, the subject of normal schools was a fit one for the convention; and Calvin E. Stowe delivered an able address upon the necessity of schools for teachers. Addresses were also delivered by Rev. Dr. Pearce, then president of Western Reserve College, and W. H. McGuffey. Resolutions were passed, sustaining Mr. Lewis as superintendent; recommending music as a branch of instruction in common schools; asking for a teachers' seminary at Columbus; and urging upon teachers the importance of liberal efforts to elevate the profession.

Mr. Lewis, in 1838, visited sixty-five counties—all but ten in the state—in which he delivered addresses, and studied the condition of schools, and the wishes of the people. From the information thus gained, he had no doubt that a large majority of the people were in favor, and comparatively few opposed to the new law. But time enough had not elapsed to enable the warmest friends to witness the full operation of the system. It was, to two-thirds of those who were active, a new work, and in many places an arduous one. The burdens of the law had yet only been fully known, and the people were just about to realize the results of the liberal legislation of the last winter; yet it was evident every where that the year 1838 had witnessed a more rapid and extensive development of public enterprise and effective action for common schools, than had been

known at any previous period. Mr. Lewis thought there was too much effort to tax the memory, and not enough to develop the powers of the mind, and great neglect of education for girls. He asked for some change in the law, which would allow German schools in districts where a majority of the people spoke that language; he repeated his suggestion of authority for loans in districts to build schoolhouses; he plead for ventilation, and *humane* seats and desks; asked for increased power over schools for corporate authorities; again suggested the need of evening schools, and of county superintendents, independent of auditors' offices; prayed for school libraries; and pressed his idea of central township schools or academies.

This was a favorite measure with Mr. Lewis. He had delivered a lecture upon it before the college of teachers.* He desired a law, giving all the school directors in a township power to establish a central school, with a board of education, having authority to assess such a tax upon the township as would support it.

Before Mr. Lewis' report had been read, a resolution had been offered in the house, and one was soon after presented to the senate, asking that the office of superintendent of common schools be abolished. They were laid on the table. There was dispute upon the printing of the report; and attempts were made, till late in the session of the legislature, to abolish the state fund; to release township superintendents; to make the state auditor state superintendent; and to reduce the tax. All these attempts failed, however, except the last. Mr. Lewis had a strong hold upon the people, and the legislature appreciated it. The law was so amended as to allow county commissioners to reduce the tax to one mill, but in other respects it was improved; although the publication of the "*School Director*" was not ordered, and county commissioners were authorized to excuse township clerks from serving as school superintendents for a second year. All of Mr. Lewis' important suggestions were embodied, excepting those on libraries and township high schools. His exposition of abuses in the lease and sale of school lands had cost much labor, but were of a value which can not now be fully estimated. They were added to labors arduous enough, but to them was also added other extra duties, requiring much thought and investigation.

The legislature of 1837–8, had instructed Mr. Lewis to report upon

* This lecture was delivered at Cincinnati, in October, 1837. Mr. Lewis had been appointed to report on the expediency of adapting common school education to the entire wants of the community. He spoke on the expediency of making the course of instruction in public schools so ample and various as to meet the wants of all classes of citizens. He proposed central township schools, equal to the preparation of a student for college, as practically advantageous and economical.

the expediency of establishing a state university for teachers, and upon the best plans for the conduct of such an institution. He responded to this request in an elaborate report, which was submitted in February, 1839. It is a document creditable to the State, and ought to be more widely known than it is. Many passages deserve repeated quotation. It sketches graphically the graded school of the present Ohio system; describes common schools as they were in Ohio in 1834–5–6; dwells upon what they ought to be, depicting very clearly what they are, in many respects, now; suggests teachers' institutes; and shows, most conclusively, that a teachers' seminary ought to have been established at the Capital.

Mr. Lewis' health had been impaired by the severity of his labors, and the exposures to which he had been subject. He did not, however, abate his zeal, but contributed articles to the newspapers, issued circulars to county commissioners, to auditors, to teachers, and parents (which are models of their kind;) made his third annual report; and resigned his office.

During 1839, a "*Common School Advocate*" was published monthly, for gratuitous circulation, in Cincinnati, and it liberally quoted from Mr. Lewis' communications. The press of the state generally was liberal toward him, and toward the cause of common schools, and should not be forgotten when we consider the influences which have promoted their adoption and elevation. There were more county educational conventions, and better ones, in 1839, than there had ever been; and the state convention in December of that year was more largely attended, and was more influential, than any previous one. Samuel Lewis delivered an address on "common schools, and their effects upon pecuniary interests;" W. H. McGuffey, one upon "private schools, and their influence on common;" Milo G. Williams spoke upon "the claims of national science in public schools;" and Warren Jenkins, who had just issued a manual of the Ohio school system, lectured upon "Ohio school laws." The convention adopted firmly progressive resolutions. Governor Shannon applauded the school system in his annual message, and deprecated essential change; but the legislature had not been in session many days, before it was evident that the school system was in danger of being impaired. The superintendent's report was presented to the house, on the 13th of December, 1839. It was not as elaborate as his first or second; but it reviewed the school law, and declared it to be the best of any with which Mr. Lewis was acquainted. In one of his circulars he had said that he found opposition oftenest among those who had not read the law, or those who had read and studied, that

they might misrepresent it; and, in view of these facts, he urged, again, the need of county superintendents; devoted considerable space to the education of the poor; and defended the common schools from the imputation that they were institutions of charity. He asked for the publication of the laws and forms; presented clearly the necessity for a state superintendent; and reported the general state of education to be encouraging. Reading, writing, arithmetic, and grammar, were taught in most of the schools; they had been kept open, on an average, four months; and the average wages of teachers were $16 per month for males, $10 for females.

Mr. Lewis had, in his first report, represented the advantage of employing young women as teachers in elementary schools; and, under his administration, the proportion of schools intrusted to them was largely increased.

When the legislators had received his report, they disputed about the number of copies which ought to be printed; and, in the house, a facetious debate sprang up, which, in one respect at least, illustrated the temper of a portion of the members. A certain gentleman was opposed to the printing, unless his constituents could have copies in German, because they could not read English; another member demanded copies in Welsh, because his constituents could not read either English or German; and another member said that a portion of his constituents could not read at all, therefore he was opposed to the printing, unless a committee was appointed to go around and read the report to them. The house voted to print five thousand copies, in *English*, and the senate concurred.

Skillful attempts were made, from time to time, to impair the efficiency of the school law; but most of them were sternly resisted. Three different bills were introduced to the house. There were debates on reducing the superintendent's salary; on abolishing the office; or giving it to the state auditor or the state secretary. The house and the senate could not agree. They had duplicate committees of conference. The house adhered and the senate insisted. On the last day of the session the friends of the school cause succeeded in bringing the two houses to an agreement, in which the school law was left intact, but the office of superintendent, with $400 to employ a clerk, was added to that of the secretary of state.

Mr. Lewis had been paid $500 for one, and $2,400 for two years; but he received nothing for his time or labor, his salary serving only to pay his expenses when required to be away from home. His friends claimed that he had saved the state, or the school children in the state, $60,000 by his school-land investigations and exposures;

and not even the bitterest enemies of the school system denied him commendation for zeal, industry, and popular ability; while, with one voice, educational men have since declared that, by his labors, the whole educational tone of the state was elevated and set forward.

The following extracts from an account of Mr. Lewis' services, in a biography by his son, Rev. William G. W. Lewis, does not too highly estimate the good work which he accomplished.

It is certain that what he did to awaken public attention to abuses which had been committed in the leasing and selling of school lands, aroused the only opposition which arrayed itself against him; and the only dissatisfaction expressed with his general labors, sprang from among school officers and school-teachers, who were unwilling or unable to reach the standard of industry, zeal, and intelligence which the superintendent desired.

The following abstract of the statistics in Mr. Lewis' reports presents a flattering picture of school progress, during the three years of his official labors:—

Years.	No. Schools.	No. Scholars.	No. Teachers.	No. of Months Taught.	Amount paid for Tuition.	No. of School-Houses built.	Cost of School-Houses
1837.....	4,336	150,402	7,902	22,168	$317,730		$ 61,890
1838.....	4,630	108,596	7,515	28,671	488,085	671	65,732
1839	7,295	254,612	7,928	29,199	701,091	731	206,445

Governors, secretaries of state, and educational men of wide knowledge, have, almost without exception, from 1840 till the present time, borne willing testimony to the fact that, by Mr. Lewis' industry, wisdom, and eloquence, the whole educational tone of the state was elevated, and the most fruitful seeds were sown for that which bears now to every child in Ohio the privilege of a good education. No one, who studies the events of his superintendentship, and the results which have followed it, with an unbiased mind, will dispute even higher claims for Mr. Lewis, as a friend of popular education, than we now set up.

It is not to be denied that, in the present excellent school system of Ohio, the forethought and practical suggestions of Samuel Lewis, put on record in 1837, 1838, and 1839, are embodied to a greater extent than those of any other man. The school law, adopted in 1853, was rather a codification of old laws than a new act, except in so far as it recognized practically the great doctrine that the property of the state should educate the children of the state, and authorized a state commissioner, school libraries, and graded departments. All of these important measures Mr. Lewis repeatedly urged, in his reports, and in public addresses.

Mr. Lewis had not been prominently identified with any political party, but had voted with the whigs; and, in 1840, was urged to become a candidate for the office of secretary of state. The transfer of the superintendence of common schools to that department of the government, was a good reason for the nomination of Mr. Lewis as secretary; but he declined. Though he supported General Har-

rison for the presidency, he was, in 1841, an active and influential member of the liberty party, then organized in Ohio. In 1842, he was that party's candidate for the state senate in Hamilton county; in 1843, was its candidate for congress, from Hamilton; and, in 1846, was the liberty party candidate for the governorship of Ohio. In 1847, he was the president of the national liberty convention at Buffalo; in 1848, was again a candidate for congress; and, in 1851, was a second, and, in 1853, a third time the liberty party candidate for governor. His first vote for governor was 10,797, his last 50,346; but the average vote for other candidates on the ticket was 34,345. In all the campaigns, he was a zealous worker. He "stumped" the state four times, making speeches distinguished for a persuasive eloquence, which renders his memory dear now to many good men and women in Ohio. He is remembered, however, not only as a remarkable advocate for freedom, but as a most popular and efficient worker for the advancement of temperance reform, and for the promotion of other movements designed to ameliorate the condition of the unfortunate; to elevate the degraded, and to reclaim the misdirected, and reform the vicious.

Severe labors, in the campaign of 1853, very perceptibly impaired his health; and, in the spring of 1854, he said he "was sentenced with death." He had been a professing christian for more than forty years; he was free from all pecuniary embarrassments; no man was his enemy; he was the friend of all mankind; and he was prepared to die. His death occurred on the 28th of July, 1854. He was mourned, not only as a husband and father, but as a christian friend, as a useful minister of the gospel, as an eloquent orator, as an exemplary citizen, and as a self-sacrificing philanthropist. His wife and a son and daughter survive him.

A correct opinion upon the affectionate regard in which Mr. Lewis was held by those who were associated with him, may be found from the resolutions adopted by the Union School Board of Cincinnati, of which he was president.

DECEMBER 4th, 1854.—Rufus King, of the committee appointed to prepare resolutions expressing the sentiments of the Board on the virtues and valuable services of its late president, Samuel Lewis, offered the following, namely:—

"The decease of Samuel Lewis, late member of this Board, and president from its foundation, having been announced, and this Board having, in common with his friends and fellow-citizens, a deep sense of the gratitude and veneration which are due to his memory; and desiring to leave an enduring tribute to the good name and works of one whose strength and purity of character and mind, whose love for, and firm resolve to elevate, his fellow-men were such as are but rarely given to man, and are a noble incentive and guide to those who shall succeed him; now inscribe this *memorial* of him upon their journals. To him the state is much indebted for a new era in her common schools, and for invaluable services in that department to her highest councils. And amid the toils and dis-

tractions of a very active life, he was chiefly instrumental not only in advising and inducing the rich endowment created by Mr. Woodward for the cause of education, and erecting Woodward College, but he continued with constant zeal to foster it, as well as that other honorable endowment bequeathed by Mr. Hughes, for free schools; watching over their disposal, preservation, and enhancement; till, at length, when the opportunity was ripe for bestowing upon these trusts their noblest ends, he lent the whole of his zeal and talents to effect that union of the Woodward and Hughes funds with the public school system, which has opened, free and common to every child of Cincinnati, the way to a high and liberal education. Thus, through all his career, he labored in the foremost rank of the friends of universal education, and died worthy of the public honor which he wore. Therefore,

Resolved, That the death of our president has not merely deprived this Board of one of its foremost and most valued members, but has taken away from the great cause of free education, an advocate and ornament who was second to none in its roll of distinguished names; and that we thus record these sentiments, in the hope that such an example may not die, but live, to incite others to "go and do likewise."

As average specimens of Mr. Lewis' style of composition, and as fair testimony in support of what I have claimed for him, as a man of just views, and of liberal forecast, I make a few extracts from the normal university report that has been described.

There is a general spirit of enterprise pervading the community, unshackled by those artificial restraints that exist, more or less, in other nations, and were, till very lately, felt even in the older states of this confederacy. Mind seems to have multiplied its power to an enormous extent. Instead of having a few master-spirits to direct and control the mass of mind, each one of the great number that makes up that mass, is arming itself to become, in its sphere, to a greater or less extent, a master-spirit. Our people, and almost the entire world, have felt the powerful upheavings of this comparatively new energy. It is not merely physical, or merely intellectual strength. In this country it goes forth armed with the power of the government itself. To restrain it, would be as impossible, as to turn back the waters of the mighty stream of the West. It can not be restrained. But it may be guided—morally, religiously, intellectually—and thus made to fertilize and enrich; or it may be left to overwhelm and destroy.

We must see the connection that exists between eminent learning and eminent success in the different pursuits that now engage our attention; and our course of studies must adapt itself to those pursuits, to a sufficient extent, at least, to make that connection palpable. It will not be required to make the course less thorough, but rather increase it, by adding those practical subjects which are so much neglected, and making all that is called dry in study, aid us in those departments that our natural, civil, commercial, agricultural, and moral condition and relations make it indispensable for us to understand. And equally important is it, that our health should be cared for; better for our sons and daughters, that they should never pass beyond the rudiments of common school learning, than to obtain more than this at the price of sound, vigorous bodies and constitutions. The mental powers of a man are withdrawn from the world, when his body is worn out; and just in proportion as these powers are increased, and made more useful, is the body, through which they are exercised, more important. Whatever else is neglected in a college, the health of the student should be carefully attended to.

If we are to have a standard of literature of our own; if we are to have a reformation and improvement in the higher walks of learning and science; if the great book of nature is to be opened, and the science of this day, and other days, is to be made tributary to the development of the unbounded mental, moral, and physical resources of this heaven-favored land; if all the hundreds of thousands of our youth, in our common schools, are to have furnished, for as many as will improve it, the advantage for traveling the full length of this most delightful road, nor less delightful than useful; if all the colleges, now organized, are to have a point of elevation, erected far beyond their present objects, with sufficient induce-

ments to cause them to put forth increased energies; if, in short, Ohio would bring forth the cap-stone, and present to the world a system of education, embracing every department of learning, from A, B, C, to the highest possible literary attainments; then must she establish a college, or university, or institution of some other name, adapted to these great purposes.

It is now conceded that at least nine-tenths of our youth must henceforth receive their education in common schools. This brings to the support of these schools the great body of the people, who will not be contented with a second-rate teacher. Our state is multiplying her towns and villages, and in each of these there will be (where there are not now,) several schools so arranged as to make several departments, the lower of which will take the small children and those just commencing. From these lower rooms, when they have reached certain attainments, to be fixed, they will advance to another, where they will be carried on to such further point as convenience may designate. Thence, they will advance to the highest department in the school, and here will be required the most experienced and best educated teacher. He should thoroughly understand all the branches of an English education, as taught in our best schools; including the exact sciences, to a considerable extent. In addition to this, he should be well acquainted with the philosophy of the mind, and be capable of directing younger teachers, as he would frequently be at the head of a school having several departments, with children of all ages, and pursuing a great variety of studies; and, however well otherwise educated, he should have acquired a habit and love of study. He should be improvable, and try, at least, to increase his usefulness, and improve the condition of his school every month. The best educated men sometimes fail as common school teachers, because they look upon the work as beneath them. This false sentiment must be eradicated, and a good teacher of the common school, rising above such prejudices, must estimate for himself the importance of his work, and make it his glory to excel in his office.

A teacher, while instructing a child to read (if he understand his business,) can give him a tolerable knowledge of history, geography, etc.; in fact, if we intend to awaken the real intellectual power of our youth, we must teach them to think. This must begin with their first reading-lesson. To teach a child to pronounce a word without connecting it with an idea, is to teach it to be superficial in all after life. The child's thoughts must be directed to the ideas or principles contained in the lesson, and thus will be cultivated the power of concentrating the whole mind on any given object or topic, a power that is more needed, and the want of which is more felt, than any other mental ability. Were our youth to receive proper early instruction, they would not, in after life, read a page or a paragraph, without getting the ideas it contained, and they would easily distinguish on all subjects, because their habits of thought and discrimination would have been cultivated in the proper manner. But this subject, which ought to occupy the attention of every lover of his country, can not be dwelt on here to any greater extent.

As moral influence is the only power that gives efficacy to any of our institutions, youth should early be taught the habit of self-control; they should be so instructed as to make them orderly, from choice, and their choice should be based on correct motives. And, while they should observe rigidly the laws of the teacher, he should be both able and willing to show to the youth the reasonableness of law and order. To compel obedience to the law, against the youth's sense of justice, is but laying the foundation of future discontent with all government. There are no rules required in schools, of which a competent teacher can not show a reason satisfactory to nineteen-twentieths of his scholars. As moral government is substituted for adults, instead of physical power, to preserve order in a free country, so we are called on, whatever expense it may require, to give such character to our instruction, as will subject our youth to the proper influence, at the earliest possible day. More of good or ill depends on this part of education, than barely to learn reading and writing. If we are right in the kind of instruction that is given in our poorest schools, it is not necessary to describe further the kind of teachers required.

It may now be considered as a settled question, that there is something peculiar in the art of governing and teaching a school, which may be taught and

learned, as any other art or profession. There are, to be sure, many excellent self-made teachers, who have become so by long experience and labor, and there are many self-made men who are eminent, in all other professions; and, in neither case, can it be pretended that the success of one man, without superior advantages, would justify us in abolishing those institutions which are intended to aid students in such professions, or that, because a few succeed in spite of their disadvantages, therefore, all men can do so. If one man has learned to govern a large school with very little corporal punishment, he can teach another, with ordinary capacity, the same art. If one man has learned how to adapt his instruction to the great variety of minds presented in the school-room, he can teach others to do so. If he has learned a mode of approaching each mind in such a manner as to wake it up and secure at once a love of himself and the study; if he has found the art of making children reason at an early age; these, as well as all other important acquisitions in the business of teaching, can be imparted to others of ordinary capacity. Heretofore, teachers have all acted without associated effort—each sought his own, and no other interest; his experience died with him, and no record was preserved of improvements, as in other professions. To this cause may be attributed the want of improvement in a profession so important to all our interests, individually and collectively.

With the experience of other nations, and other states, as well as the success which has attended individual experiments in our own state, before me, I have made up my mind that, with teachers, educated for the business, sufficient to supply all the districts in our state, we should, with the same money that is now expended, secure to our children an education far exceeding in amount, and far superior in quality, to what is generally furnished. The advantages of associated power are felt in every other department, and may also be felt in this.

VII. REFORMATORY PHILOLOGISTS.
JOHANN MATTHIAS GESNER.*

[Translated from the German of Von Raumer, for the American Journal of Education.]

JOHANN MATTHIAS GESNER was the son of a preacher, and born in 1691, at Roth, a village of Ansbach, in the Rezat. He early lost his father, but was well instructed after his death by his stepfather, Pastor Zuckermantel, and afterward sent to the gymnasium at Ansbach. Under the learned Pastor Köhler, he here acquired not only Latin and Greek, but also Hebrew, Arabic, and Syriac, and several modern languages.

In 1710, he went to the University of Jena, where he studied Hebrew more thoroughly under Danz, and attended the theological lectures of Buddeus, to whom he became much attached. This teacher had long entertained the wish that a great want in the university should be supplied. After their university studies, most of the theological students went into situations which required positive pedagogical knowledge and efficiency. Many became school officers, many tutors, and still others school inspectors. But in the university there was not the least pains taken to prepare the students, in any measure, for these duties. This want, Buddeus thought, could be best supplied by the erection of a pedagogical seminary. In the young Gesner he believed that he had found the right man to be placed at the head of such an institution. He therefore induced him to write the "*Institutiones rei Scholasticæ*," which appeared in 1715, and were to serve as a compendium for the use of this seminary. All were astonished at the learning, sound judgment, and clearness of the author at twenty-four years.

Even in this work, Gesner's tendency to *polymathia* showed itself; for it contains many of the outlines of his later "*Isagoge in Eruditionem Universalem.*"

He fully discussed instruction in the ancient languages. It would be imagined that an experienced educator was speaking, upon hearing the acute rules which he sometimes gives for teachers.

In his remarks upon instruction in Hebrew and the modern languages, he gives evidence of his studies at Ansbach and Jena.

* Materials.—1. "*J. A. Ernesti Narratio de J. M. Gesner ad D. Ruhnkenium.*" 2. Gesner's Works; viz., "*Institutiones rei Scholasticæ*," Jena, 1715; "*Minor German Works*," Göttingen, 1756; "*Opuscula Minora*," Breslau, 1743; "*Primæ Lineæ Isagoges in Eruditionem Universalem. Accedunt prælectiones per J. N. Niclas.*" 2 vols; Leipzig, 1774.

He then passes to other studies, recommending especially the pure and mixed mathematics.

He did not, however, confine himself entirely to instruction, but considered all that lies within the province of pedagogy. Thus, he fully discusses the requisites of a teacher; not only as to knowledge and gifts for teaching, but also moral character. He further describes the scholar, and gives directions for examining, guiding, and managing him.

In short, this little book, for that time, completely fulfilled its purpose, as the compendium of pedagogical lectures at the university; and we can only wish for a similar work, equally as good, in our own times.

One design of the "*Institutiones*," however, failed; Gesner himself, that is, did not get the appointment of lecturer upon them at Jena; for he was shortly afterward invited to Weimar, as conrector and librarian. During his thirteen years' stay in this place, he was all the time increasing the universality of his knowledge by the most comprehensive studies, a work in which his place as librarian was of the greatest service to him. He was thus well fitted to be afterward of essential service to one of the greatest European libraries, that at Göttingen, and to facilitate its first youthful progress. From Weimar he went, in 1728, to Ansbach, as rector of the gymnasium there, and then again, in 1730, he became rector of the celebrated Thomas School, at Leipzig. This he found in a very low condition, both in respect to studies and discipline.

Jacob Thomasius* was rector of this school from 1676 to 1684. At the latter period,† he was opposed to the reading of the ancient classics in the school, and at last came out in a distinct hostility against them. Accordingly he almost entirely banished them from the school, and put in their place the reading-books and chrestomathies of modern Latinists; such as Muret, Buchanan's "*Psalterium*," Schœnæus' "*Terentius Christianus*," &c. Johann Heinrich Ernesti, who succeeded Thomasius and was rector for forty-five years, from 1684 to 1729, did not discontinue this practice. When Gesner came into Ernesti's place, and found that scarcely one or two classics were read in the school, he suspected the wisdom of the rule. He had previously distinctly defended the reading of the classics, excluding only those which taught openly godlessness and sin. On this point he had no scruples in Leipzig; but he considered whether such scholars as commonly learn Latin, only to understand their professional

* Father of the celebrated Christian Thomasius.

† "The Thomas School, at Leipzig. A centennial, by G. Stallbaum, Ph. D., and rector of the school. 1839."

text-books, should not read those text-books at once; the theological students the symbolic books and Hutterus; the jurists the "*Institutiones*," &c. But in a man of so thoroughly classical an education, an error so truly unnatural to him* could prevail only for a moment, in regard to the nobler studies of youth. He soon bethought himself, and introduced anew a study of the classics. Gesner at the same time made provision for a suitable pursuit of real studies, especially of mathematics; which were taught, from 1731, by Johann Heinrich Winkler, well known as a natural philosopher.

The Thomas School was celebrated for its long-established music department, which was at one time under the management of the most skillful masters, such as Sethus Calvisius, Hermann Schein, and Kühnau. The most distinguished of all its masters, however, was that one whom Gesner found in the place at his entrance into the school; namely, the immortal cantor, Johann Sebastian Bach, for whom he entertained a great respect.†

I have mentioned that, at Gesner's coming to Leipzig, he found not only the classic studies, but the discipline, of the Thomas School, in the lowest state. There was among the pupils an universal and disgraceful indolence. They had one habit in particular, of pretending to be sick, in order to get the better diet which was provided for sickness, and to have vacations for months together. The medicines which were given them, they threw away. Thus the expenditures for medicine and the care of the sick increased, until it might have been believed that the institution was not a school, but a hospital. Gesner put an end to this practice in this way: When the scholar told him he was sick, he visited him at once, inquired in a friendly way what he wanted, and said: "It does not yet appear clearly what the disease is; until it does, you must eat only the simplest food, and stay in bed." A watcher was then appointed for the sick man, to see that he complied strictly with this direction. By far the greater part of them, quite restored by fasting and weariness, recovered in one or two days; and over the few who were really sick, and who were obliged to remain so, Gesner exercised fatherly care.

In 1733, there appeared the "*Laws of the Thomas School*," drawn up by him, which related mostly to the discipline of the scholars. "It is incredible," says Ernesti, "how useful Gesner was to the school; not merely by organizing a better administration, and fixing it fast and steadily by the new laws, but by teaching in a manner then new

* Later educators could be named, to whom this error was natural—and is now.

† In a note upon Quintilian, I, 12, 3. Gesner says: "I believe the greatest admirer of antiquity would confess that many Orpheuses and twenty Arions are all included in Bach alone, and in any one else like him, if there be any such."

to us, and exceedingly beautiful."* In the next year, 1734, Gesner left Leipzig, having received an invitation to the new university at Göttingen. He was there professor of eloquence and poetry, and also librarian. He was also made director of the philological seminary, and inspector of all the Hanoverian schools; two important pedagogical offices, for which the experience which he had gathered in his three rectorates had well fitted him. The views which, under the influence of Buddeus, he had advanced in Jena, in 1715, he now, twenty-three years afterward, in 1738, introduced in the seminary of Göttingen. This was intended for giving to young theologians a theoretical and practical training for the business of teaching. For his lectures upon the whole of pedagogy, he took, as a basis, his "*Institutiones rei Scholasticæ*." Besides their philological studies, the pupils of the seminary studied also pure and mixed mathematics, natural sciences, and geography. They practiced teaching in the city school of Göttingen. The most important of Gesner's lectures are in his "*Isagoge in Eruditionem Universalem;*" a scientific encyclopedia. We have these lectures in the form in which they were written down by a learned hearer, Niclas. When Niclas laid his manuscript before Gesner, the latter said: "I recognize myself in them; print them."

In 1740, a German society was formed in Göttingen, of which Gesner was chosen president. Afterward, in 1751, was founded the Göttingen society of sciences; at the head of the historical and philological section of which Gesner was placed. He afterward became president of the society.

Notwithstanding the many offices which required so much of his activity, he wrote works extraordinary in number and value. Two of them I have already mentioned. To these must be added many excellent editions of the classics; as, for instance, Livy, Quintilian, Horace, the writers on agriculture, &c., and also his celebrated "*Thesaurus*."† Many of his single Latin treatises, inscriptions, addresses, prefaces, &c., have been published, under the title "*Gesneri Opuscula Minora*," besides a similar collection of German compositions, called "*Gesner's Minor German Works*."

In the "*Isagoge*," and in these collected Latin and German writings, is to be found a treasure of pedagogical experience and opinions. "May these instructions," says Gesner, in the preface to his German writings, "based upon an experience of more than forty years, and the often repeated consideration of them, have a good influence upon

* Ernesti's opinion is the more important, as he was Gesner's successor in the rectorate of the school.

† Ernesti calls the "*Thesaurus*" "a very great and most laborious and erudite work, sufficient alone to secure the immortality and perennial glory of his name."

practical teaching." The teaching and learning of the ancient languages continues to have an especial attraction for him, as earlier, when he wrote the "*Institutiones.*" In this department his views were entirely opposed to the usual ones, especially in regard to the grammars used in schools. "These were originally," he says,* "intended for facilitating the study of languages; but, latterly, very learned grammars have appeared, which are as unfit for teaching the rudiments of grammar, as the most subtly and skillfully made lancet, for cutting bread." "Children," he says further, "should not be martyred with the unintelligent learning by rote of rules and exceptions, and thus be made to lose the taste for study, in the beginning, and perhaps forever." Languages were made before grammar; men spoke correctly before they thought of the art of speaking. Also, he says, "It is a hundred times easier to learn a language by use and practice, without the grammar, than from the grammar, without use and practice." "The latter is absolutely impossible." In particular, it is not necessary to make the boys learn Latin rules for the gender of words, &c.; it is better for them to learn a phrase or a sentence, in which the rule appears. For our knowledge every where proceeds, not from general abstract rules, but from single examples.

He then speaks against the general overvaluation of grammatical knowledge. "It is among the most common faults of Latin instruction," he says, "to reprove harshly, to punish or to ridicule, for any fault in the scholar's grammar, as if he had sinned against the laws of God and man."† "Moreover," he continues, "those who need to understand Latin, in order that they may be enabled to read books in it, are very seldom in a position to need a grammatical oracle; and even there would be twenty or thirty to one, who would be in need of the ability to write, and particularly to write in an accurate manner.‡ These views of Gesner were so entirely opposite to those of the day, that he was attacked on account of them from many directions, but mostly under a misunderstanding. "I reject grammar," he replied to his opponents, "only for youth, as hurting them more than helping them. But, for grown persons, it is in the highest degree necessary."

Here we must mention Gesner's valuable preface to his edition of Livy, in which he speaks of the two different methods of reading the

* See his German Works, p. 256. And see p. 296, for a description of the bad methods of teaching language which were usual in the schools.

† In like manner he says ("*Institut.*," 81.) "It would have been better to speak barbarously, and think piously, than to express an evil mind even in the most elegant words. With this sentiment, Augustine agrees entirely. See his "*Confessions*," 1, 18.

‡ Gesner discusses the question for what, and to what extent, a knowledge of Latin is necessary, in the "*Isagoge*," 1, 114, &c.

classics; the rapid, and the slow.* Here, likewise, he sets himself in opposition to the usual customs of the schools. He admits, it is true, that it is a good method to read, in the beginning, some book of a reasonable size, or at least some part of it, very thoroughly, for the sake both of obtaining certainty of knowledge, and also so as to learn, as it were by example, what is a thorough understanding of the classics. But he goes on to declare himself most distinctly against the entire dominion of the method of slow reading in the schools, which has become degenerated, because in the course of the explanation of one author, the most heterogeneous things are lugged in. Thus, pupils sometimes read for years together in one book of Cicero's Letters, or the "*De Officiis*," divide one play of Terence, or one book of Cæsar, into so many little parts that even an extraordinary memory can not retain them all.

After this he goes on to describe and recommend the more rapid method, that of reading in course; in which the scholar endeavors, with his whole soul and individual attention, to fix in his mind whatever author he is reading, and to understand him only, and enjoy his beauties. He relates that, when he has read Terence in this manner to his scholars, they have sat with open mouths, silent, with eyes, ears, and minds occupied, laughing even, and thus betraying their pleasure by their gestures. But when he read the Phœnissæ of Euripides in the slow way, with the same scholars, they sat, it is true, with open mouths, but it was because they were silently gaping or sleeping.

Gesner, as we have said, was among the first who undertook earnestly to bring to pass the adaptation of the gymnasiums not only to such scholars as were to pursue a learned occupation, but for those who were not, also; and thus, that in them real studies should be more practiced.

While he was thus laboring, earnestly, wisely, and practically, for the improvement of schools, he had also at heart, during the twenty-seven years of his professorship, the good of the university. This appears in the academical prospectuses, which, as professor of eloquence, it was his business to write. It will appear from them, he says, "How strenuously it has been endeavored to keep in order the youth of the university, who have a good title to a noble freedom, by means not having the shape of strict laws, which belong to the common unreasoning crowd, but that of a fatherly and friendly

* This edition of Livy appeared in Leipzig, in 1735. The preface is reprinted in the "*Opuscula*," 7, 289.

Ernesti entirely agrees with Gesner on the point in question, and says that he followed his method in explaining the classics in the Thomas School.

address, and thus to preserve them from the dangers into which so many fall by a misuse of freedom." He expresses himself in a clear and noble manner in "Considerations upon the friends of students;" "All teachers in the higher institutions of learning are, by their station and duty, the intended and, as it were, the born friends of the students;" and it is their duty to seek the good of the students, without regard to their own profit. For this reason, those who do not conceal the faults of the students, must expose themselves to the danger of awakening displeasure by their admonitions. He prays God "to keep the fathers of the university in this, the only right state of feeling toward those intrusted to them," and to preserve the university free from "harmful students'-friends," and "hypocrites."

There are indications in the "*Isagoge*," of the frequency and plainness with which he attacked his hearers in his lectures. He there complains, for example, that while the sciences have increased, the students have lost in industry. When he studied in Jena, lectures were given as early as five in the morning; while later, the professor set the hour at seven, and even then got scarcely a hearer. "Formerly," he says, "the students listened to lectures all the day, now they spend two hours over their coffee; while the *friseur* is coming, the curling-tongs are heating, and the hair frizzling, hours pass away. To study after four or five in the evening is thought by many a degrading requisition." In the programme for the summer lectures for 1743, Gesner recommends very earnestly to the students a persevering attendance upon the lectures. The more skillful the teacher, he says, the more close the connection of lectures, so that by as much as the latter are based upon the former, and they all constitute one whole, so much the more injurious is frequent absence to the student. And again, he advises his hearers to be attentive during their lectures, as this stimulates and increases the zeal of the teacher. "If there be any thing pleasant in my books," says Martial, "my hearers have occasioned it." This is owing to the happy influence of men's minds upon each other; and in like manner a bad influence is exerted. "One gaper," he continues, "makes the rest gape. Nothing is more wearisome than to instruct, when most of the hearers are sleepy. Quintilian says, 'as it is the duty of the teacher to teach, so it is of the scholar to be desirous of learning.'"

We have seen that Gesner sought and followed new methods for schools; it should be also mentioned that he opposed an academical custom; that of the use of Latin in the lectures. Let us now pass to other points of distinction between him and most of the philological pedagogues of his age.

The chief of them is this; that he repeatedly recommended real studies. Studies in languages, he said, should never be disjoined from those in things. This separation of things, which are by their nature intimately joined together, is a real evil. By reason of it, youth learn so many names, without one idea of the things which are named. For the purpose of elementary instruction, such books should be used as will furnish also real knowledge. He liked, accordingly, the works of Comenius, especially the "*Orbis Pictus*." As president of the German society of Göttingen, a place which would scarcely have been offered to any other philologist of his times, he esteemed those schools fortunate whose instructors, by sympathy with that society, have acquired "a love for the mother tongue, neglected in so many ways, and the ability to express themselves well in it." This facility is to be attained, not by rules, but by making translations from the masterpieces of the ancient classics.

Among real studies, Gesner gave a high place to the natural sciences, in which such great advances have been made of late years. He himself, while rector in the Thomas School, attended the lectures of Hausen, upon experimental physics. The boys, he says, ought certainly to study drawing; and we have seen how high a value he set upon mathematical studies, especially astronomy. "God," he says, "has so connected them with the heavens, that it is only by the observation of them that we can see where and at what time we are living." He recognizes geography as the vestibule, basis, and light of history, especially of that of the mother country.

Gesner thus showed himself to be a man who united, with the most thorough knowledge and love of antiquity, a correct appreciation of real studies; and who sought new methods of teaching, when he was convinced of the faults of the old. No one can imagine that for this reason he is to be classed with Basedow. In addition, I may here give one extract from the "*Isagoge*," which shows clearly how he differed from most of the reformers of the eighteenth century in his most fundamental plans. He says: "The beginnings of all sciences must be believed.* This is a very important rule, especially at the present day, when even little children are, from an early age, instructed by their teachers to believe nothing. As soon as they begin to show one spark of understanding, and wisdom, they are spoken to of opinions. And since we are by nature only too much inclined to see every thing for ourselves, and to receive nothing by simple belief, but to wish to discover the truth for ourselves, the boys

* In another place he quotes Aristotle's remark, that "it is necessary to believe what is learned."

too soon get the idea that that only is true which we understand from our natural senses; and this has the evil consequence that they are willing to believe nothing, will not learn what is necessary, and are unwilling to obey their teachers. Man can not by himself gain the first elements of learning; he must receive them from others, and what they teach him he must believe. If the boy should begin to dispute about why one letter is called A and another B, and especially if he demands reasons for it, he could ask questions for years without learning any thing; and, moreover, it would not be possible to answer him. Very often no account can be given of the first elements of things. For instance, let a pupil ask, why are such and such things called point, line, surface? And let him take nothing by belief until the reason of it is given, and he will learn nothing to eternity. I know this by experience. I have often seen, in good families, boys so precocious as to ask questions all day. But the German proverb was true of them—that a fool can ask a thousand times more questions than a wise man can answer. I do not mean by this that the utterances of the teacher are to be considered as oracles, from whose sayings there is to be no variation; but only this, that as long as we are pupils, we must take things by belief. Afterward only, when our understanding is ripened, and we have become independent, may we prove what we have learned."

In Gesner we have thus become acquainted with a man distinguished for thorough learning, clear understanding, pedagogical wisdom, and gifts for teaching; and unweariedly active and conscientious in his official duties. Ernesti, who lived in close connection with him for many years, describes him as exceedingly religious, resigned to the will of God, and thus of like demeanor both in good and evil days, and as a loving father and friend. After a long and active life, his end drew near. When the physicians announced to him his approaching death, he answered: "What is to be settled between me and God, I have not put off to this time." He departed in a peaceful and Christian manner, August 3rd, 1761.

JOHANN AUGUST ERNESTI.

[Translated from the German of Von Raumer, for the American Journal of Education.]

Johann August Ernesti was born in 1707, at Tennstädt, a small town of Thuringia, where his father was pastor. He received his first instruction in the school of Tennstädt, and, in his sixteenth year, he was placed in the princes' school of Schulpforte. Here he distinguished himself by his important acquisitions, especially in Greek.

In his twentieth year he entered the University of Wittemberg, where Wolf's philosophy was in the hight of fashion; and afterward went to Leipzig, where he attended the lectures of Gottsched on German eloquence, and of Hausen upon mathematics.

When twenty-three, he was, upon the recommendation of Gesner, employed as private tutor, by Counselor of Appeals Stiglitz, the same to whom the epistle upon the study of the ancients, prefixed to his edition of Cicero, is addressed. Stiglitz was superior (*antistes*) of the Thomas School; it was by his influence that Gesner had been appointed rector, and it was he also who procured the appointment of Ernesti, when only twenty-four, as conrector, and afterward, at the departure of Gesner, in 1734, as rector. Ernesti, at the same time, read lectures at the university, upon polite learning. At a subsequent period, he gave up his rectorship, and devoted his whole time to the university, giving his attention especially to theology.

He died in 1781, at Leipzig, aged seventy-four.

From Ernesti's own expressions, he would seem to have taken Gesner for his model in teaching. The latter induced him to publish, in 1734, the "*Initia Doctrinæ Solidioris*," a work which passed through repeated editions, and was brought into use as a school-book in various countries, as Saxony and Hanover, for instance. In this book, Ernesti aimed to give his instructions in as good Latin as possible; although, as appears by comparing the earlier and later editions,* he continued to labor for the improvement of its style, and to approach nearer and nearer to his ideal of Ciceronian Latin. In the preface, he relates that, as a preparatory discipline for this work, he read the best Latin writers of the golden age, and, where this would not serve,

* The very first period of the book will serve as an example. In the edition of 1734, it reads, "*Cum ad libellum hunc scribendum adjiceremus animum, facile prævidebamus, fore ut hoc consilium nostrum in multas multorum reprehensiones incurreret.*" Instead of *facile prævidebamus*, the edition of 1750 has *non parum suspicabamur*.

those of the silver age, repeatedly over. Thus, he says, he believes that he has succeeded in not admitting any thing into his book which was not heard in ancient Latium.* Only from necessity has he here and there used an unclassical expression.

From this saying of *Nihil veteri Latio inauditum*, it might naturally be concluded that the book would contain nothing which had not been heard in ancient Latium. And this conclusion would be, for the greater part of the book, correct. It treats, first, of arithmetic and geometry; then come the elements of philosophy, in this order: 1st, metaphysics, psychology, ontology, natural theology; 2nd, dialectics; 3rd, natural law, and ethics; 4th, politics; 5th, physics. In conclusion, come the elements of rhetoric. This table of contents reminds us of the cyclus of Melancthon's text-books; of his dialectics, rhetoric, physics, psychology, and ethics. All acquainted with the subject will readily believe that Ernesti's book would not be adapted to our present gymnasiums. The mathematical part may appear to us scanty; but when we consider that, by the Prussian school ordinances of the year 1735, one year after the appearance of the "*Initia*," no knowledge of mathematics whatever was required of those graduating from the gymnasiums, we shall retract that opinion.

Philosophical subjects are handled at length in about four hundred and fifty pages. The fact that Christianity is here completely ignored, while, nevertheless, so many things must come up which have been known to the pupils by means of their catechetical studies, must be set down as an entire error. If, according to Picus of Mirandola, philosophy seeks truth, theology finds it, and religion possesses it, it could not but be strange, to such as had possessed it from an early age, to be set to searching for that of which they were already in possession. It would be quite otherwise if the manual should contain a comparative description of the Greek and Roman theology by the side of the Christian, although gymnasium pupils are not old enough even for such a treatise.

It is quite mysterious how Ernesti should have inserted in his school-book such chapters as this: *De conjugii felicitate consequenda*, and *De cura subolis*. Of this latter chapter we must say a little more. In it Ernesti expresses views upon education, which agree in part with the earlier ones of Locke, and in part with the later ones of Rousseau. He discusses procreation, and the management of pregnant women; urges that the mother should herself nurse her children, and not give them into the charge of untrustworthy nurses; and he

* Still, Ernesti by no means belonged to those philologists who read the ancients only with the design of patching together a Latin style, by picking scraps out of them. Against that kind of reading he declared himself most decidedly, in his letter to Stiglitz.

refers to Gellius, for the like advice. Mothers, he says further, must not give their own children to nurses, but must themselves educate them; and, if they do this, they will be beloved by the children. If parents command or forbid any thing, they should give the reasons for it; for otherwise they are obeyed unwillingly, and would rather be led than driven. Parents should not require their children to be free from faults, and should not be alternately forgiving and unreasonably strict. Instruction should be such, not that the children shall believe blindly in any thing, but only in what is given them as the foundation of their belief; and they should make inquiries for the reasons of things. Thus they will be kept from credulity, superstition, and prejudices. Care should also be taken, not to fill their memories, like those of parrots, with empty or unintelligible words.

Ernesti recommends care in the choice of teachers, and in determining upon the future occupation of the children. They should early be taught a love of true honor, the right use of money, and truthfulness.

Such pedagogical rules as these would hardly be expected from the strict philologist of the old school. It is certain that the profound, universally learned Gesner, who had pursued freely so many lines of investigation, had the greatest influence upon Ernesti in this respect. What I have given from the writings of both these men, will be sufficient to show the reader what they were, and that although in general philologists of conservative character, yet they were not blind to the faults of antiquity, and sought and followed new ways; and, therefore, that they are entitled to a place between the adherents of the old pedagogy and the new. They can be compared only to Trotzendorf and Sturm on the one side, and to Locke and Rousseau on the other.

Engd by A.H. Ritchie

F. A. P. Barnard

VIII. FREDERICK A. P. BARNARD.

Frederick Augustus Porter Barnard, president of the University of Mississippi, whose reputation as a practical educator entitles him, pre-eminently, to a notice in these pages; and who, as a writer on subjects connected with collegiate education, stands second to no other in this country, was born in the year 1809, in the town of Sheffield, Berkshire county, Massachusetts. His father, Robert Porter Barnard, a counselor at law, highly respected in his profession, and held in honor by all who knew him, for his distinguished moral worth, was an influential citizen of his native county, which he several times represented in the senate of the state. The subject of this notice is sixth in lineal descent from Francis Barnard, of Essex, England, who emigrated to this country about the year 1638, and was one of the first settlers of Hartford, Connecticut; but removed to Hadley, Massachusetts, in 1654. In the dangers to which the early colonists of New England were exposed, this family fully participated. One of the sons of Francis Barnard was killed, early in life, at the battle with the natives which, in 1675, gave its name to Bloody Brook, in Deerfield. Another, Joseph Barnard, from whom our subject is descended, was mortally wounded, in 1695, by a shot from a savage lying in ambush, who fired upon him as he was passing peaceably along, upon his proper business, through the forest. A third son, Rev. Thomas Barnard (mentioned third in order, but the eldest of the family,) settled at Andover; and from him are descended many of the name or blood, who reside in the eastern part of Massachusetts, among whom may be mentioned Rev. John Barnard, of Marblehead.

Through his mother, who was the daughter of Dr. Joshua Porter, of Salisbury, Connecticut, later in life of Saratoga Springs, and who was also the niece of General Peter B. Porter and Hon. Augustus Porter, of Niagara Falls, President Barnard traces his lineage directly, through six intermediate generations, to Roger Williams, of Massachusetts and Rhode Island, the early champion of religious liberty in this country; some of whose traits of character, particularly his firmness of purpose, strength of will, and fearless obedience to the dictates of conscience, whether by inheritance or otherwise, he certainly possesses.

The subject of our notice is indebted, for his earliest mental culture, to maternal solicitude. As a child, he attended the common school of his district, and had his place assigned him in classes in reading and spelling; but the tasks presenting no difficulty, because already familiar, through his mother's teachings, he found school indescribably irksome; and he has been often heard to speak of the childish perplexity with which he was then accustomed to regard his companions, while they were engaged in what they called *studying their lessons*.

He was, however, soon put to tasks which made him study. Before the end of his eighth year he was tolerably versed in elementary geography; and he had, with painful labor, and to his great disgust, been compelled to learn by rote all "the large print," with a good many qualifying "observations," and "exceptions," and "remarks," in less conspicuous type, in Lindley Murray's Grammar. It is perhaps quite unnecessary to mention that, of all this verbal erudition, he did not understand a single word; but that, as he never forgot any part of it, the meaning it was intended to embody was gradually revealed to him, as he acquired the ideas themselves, through other processes, later in life. After completing grammar, he was put into "parsing," in which exercise he was told that he would find his previous attainments very helpful. The force of this suggestion, however, did not come home to him very strongly; and he learned to parse by a process entirely inductive—by listening to older pupils, and by reading the "parsing lessons" placed at the end of Murray; the only part of the book from which he derived any benefit. He thus, by attention and comparison, became able to distinguish a noun from a verb, without troubling himself to apply the severe test of the definition, that "a noun is the name of any thing that exists, or of which we have any notion," or that "a verb is a word which signifies to be, to do, or to suffer."

Early in his eighth year he was advanced to the study of Latin. This part of his education was commenced under the private tuition of Rev. James Bradford, the minister of the Congregational church in his native town, whom he has ever held in grateful remembrance. The Latin grammar proved to be not in the slightest degree more intelligible to the learner than the English had been; but its contents pretty nearly from cover to cover were transferred to his memory, by the mechanical process which had already been made so painfully familiar; and they have there remained stereotyped throughout life, owing their ultimate intelligibility, as in the former case, to knowledge subsequently and otherwise acquired. It can not be questioned,

however, that this rote process has some advantages. The forms of declension and conjugation, the tabulated connectives, and the irregularities of a language, are, by means of it, indelibly impressed upon the mind; and they thus very much lighten the learner's subsequent labor. But to a child, the process is unpalatable to the last degree; and its tendency is to produce generally a dislike to books.

The subject of our notice, however, was, from his earliest years, very fond of books, when permitted to choose them for himself. The "*Tales for Children*" of Miss Edgeworth, and others, were early devoured. The school reading-books, except the dryer and didactic parts, were read and re-read. The "*Columbian Orator*" was a great favorite. The tastes thus acquired soon demanded superior aliment. Voyages and travels, history and dramatic writings, were sought after with avidity. One of the earliest books read, and long remembered for the delight it afforded, was Professor Silliman's narrative of his travels in England, Holland, and Scotland. It awakened the strongest desire to know the author—a desire which, to the young reader's satisfaction, was gratified later in life. A great part of Rollin's "*History*," and all of Shakspeare's "*Comedies*," and most of his "*Tragedies*," had been mastered before the age of twelve. The latter had been read again and again.

In the meantime, however, Latin was a weariness to both the flesh and the spirit; but it continued to be inculcated, and Greek also, for several years; the learner having been placed at school, first in the village of Saratoga Springs, and afterward at Stockbridge, in his native county. At the former place, however, he found something more attractive than Latin; having then, for the first time, enjoyed the opportunity of visiting a printing office. So strong a fascination for him hung about that spot, that he could not be prevented from devoting all the hours of his freedom from school, morning, noon, and night, and, above all, the "Saturday afternoons," so highly prized by school boys, for many months, to acquiring a practical knowledge of the magic art in his own person; and so expert a printer did he then become, that he has often, in his later life, lent an efficient hand, in emergencies, in offices with which he has had a connection, as author or editor.

In 1824, he entered Yale College, as a member of the freshman class; being the youngest member of a class long after noted for the weight of talent it embraced, and known as the mathematical class. Up to this time, he had given no attention to mathematical studies, beyond the elementary rules of arithmetic. It very early became manifest that a warm competition was to exist in the class, for the

first position in scholarship in mathematical science, and, for a time, young Barnard, excessively diffident in disposition, and as yet quite small in person, shrank from thrusting himself forward, when he was conscious that he lacked only self-possession to enable him to do so successfully. Knotty points were often thrown out to the whole class at once, any one being at liberty to rise and present solutions. It required some nerve for a boy of fifteen, to stand up and do this before forty or fifty critics and competitors, some of them of nearly twice his age. For some months, therefore, the peculiar character of his mind was not recognized; but, as he became familiarized with his new situation, and his diffidence wore off, he descended into the arena, and, from that moment, competition for the first position was at an end. From the beginning to the close of his college career, he was never, by accident or surprise, betrayed into an error before his class, on any mathematical subject; nor was he ever, for a single moment, at a loss to meet any demand made by the instructor, whether of himself individually, or of the class collectively. He never contented himself with the modes of investigation or demonstration laid down in the text-books, and rarely offered one in recitation which would be found in them. Beginning with the elements of geometry, in his freshman year, he amused himself with writing out novel demonstrations of all propositions and problems, to the end of the course; or until they became so varied and numerous, that he could not spare the time to write them. As a matter of course, he revelled in collateral reading in the mathematics; and, after his freshman year, he had invariably read and laid aside the college text-book, long before the class had taken it up. He never read a mathematical argument more than once; but usually addressed himself immediately to the task of making another and a better. In synthetic treatises, his habit was to confine his reading to the enunciations of the points to be proved, and to work out the argument for himself before examining the mode of treatment which the author had employed. It was, at that period, practiced by the instructors, to put forth original test propositions and problems, for the purpose of stimulating emulation, and exciting competition. These were invariably solved, almost within the hour, by young Barnard, and his solutions were often the only ones offered. There prevailed, also, then, to some extent, the practice of throwing out mathematical challenges, among the students themselves. Such challenges passed occasionally between members of different classes, and young Barnard was the object of a good many such. He never failed to send back the knot untied, within less than twenty-four hours. The tutor of his class in mathematics, dur-

ing the latter portion of his course, was the late W. N. Holland, afterward professor of mathematics in Trinity College, Hartford, himself distinguished for his mathematical abilities, and for his attainments in science. Mr. Holland, in writing of Mr. Barnard, in 1837, said: "I have never known any person, except the late lamented Prof. Fisher, who seemed to have so extraordinary a natural aptitude for mathematical studies. He soon outstripped all competitors in that department, and was, at the same time, a very excellent scholar in the classics, and in English literature. After graduating with the highest honors of his class, he became one of the masters of the Latin school, in Hartford; a station which, for many years, was offered only to the best scholars from Yale College."

We have dwelt somewhat at length upon the educational history of President Barnard, because his own notions of educational theory have been mostly derived from his personal experience. In all the course of his preparation for college, he had revolted against study, because he was compelled to learn what he could not understand, for the several reasons that difficult subjects were presented, before his mind had attained sufficient maturity to receive them; because they were presented in dry, concise, and technical language, too abstract for his comprehension; and because little effort was made by his teachers to compensate him for these disadvantages, by attempting, on their own part, to throw light on the obscurity. Whatever was intelligible, even in childhood, was pleasing; whatever was unintelligible, was repulsive. History, personal narrative, the drama, was delightful; language was odious. And yet this subject was only odious, because presented prematurely, or unintelligibly; for, in his later life, Mr. Barnard has been a passionate devotee to linguistic studies, and has made himself acquainted with all the languages of Europe, except the Sclavonic tongues. So soon as the subject of mathematics was presented to his mind, the clearness with which every truth stood forth in the light of demonstration, was completely fascinating, and he followed where it led, not as a task, but as a pleasure.

It is a doctrine, therefore, entertained by President Barnard, that the mind of childhood should rather be enticed than driven to the acquisition of knowledge. He further believes that the love of knowledge is so far natural, that no other excitement is needed but knowledge itself, intelligibly presented; and consequently that, in order that this condition may be secured, the subjects of knowledge, which form the substance of teaching, should be adapted to their order, and in the manner of exhibition, to the degree of maturity or development of the mind itself.

Mr. Barnard, after remaining two years at Hartford, where he published a treatise on arithmetic, which, in the words of Prof. Holland, "added much to his reputation, especially in the higher and more difficult parts," was elected to a tutorship in Yale College, being then just twenty-one years of age. This office he held but a year, having resigned it in consequence of an apprehended failure of health. During this time, however, he prepared and published an edition of Bridge's "*Conic Sections*," which has since been extensively used in American colleges, in which the work was substantially rewritten, and also considerably enlarged. It may serve to illustrate the estimation in which he was held, at the time, by Prof. Olmsted, who had been his instructor, to mention that he was engaged by that gentleman to examine, critically, the manuscript of his Natural Philosophy, then in preparation for the press. Another evidence of this consideration is found in the fact that Prof. Olmsted proposed to him, before his retirement, to come into an arrangement by which he might be his assistant professor, until such time as the college should be able to divide the chair, and give to Mr. Barnard the department of the mathematics—a proposition which would have been accepted, but for the cause above mentioned, compelling him to desist for a time from occupation.

While a student in college, Mr. Barnard had devoted the time given by most of his class to the study of the modern languages, to the prosecution of mathematical studies, in the higher departments of the science. Soon after his graduation, he perceived how indispensable to the scientific student is an acquaintance with some of the languages of continental Europe. He accordingly addressed himself to the study of the French, with such earnestness of purpose that in the course of a few months he had nearly dispensed with lexicons; and soon after began to read the language with the same facility as English. He afterward turned his attention to the Italian and Spanish, with similar success; and, at a later period of life, to the German, Swedish, Danish, and Dutch.

After his retirement from Yale College, Mr. Barnard became temporarily connected with the American Asylum for the Deaf and Dumb, in Hartford; and, during this period, he conducted, for a short time, the "*New England Weekly Review*," previously edited by Prentice and Whittier, successively. He did not long remain in this situation, however, having been invited to a corresponding position, in the New York Institution for the Deaf and Dumb. This institution, now occupying a rank among the first of its class in the country or in the world, had then just fallen into the hands of its present able

president, Dr. H. P. Peet; and one of the earliest and most satisfactory evidences which Mr. Peet gave of his clear-sighted sagacity, consisted in his judicious selection of his colleagues. It is believed that he will cheerfully testify not only to the activity, zeal, and success with which Mr. Barnard discharged the immediate duties of his station; but also to the ability displayed by him in assisting to bring the claims of this department of education to the favorable regard of the legislature and people of the state; and, still further, in directing the attention of the professors of the art in this country, to the scientific and psychological principles on which it rests. In the library of the institution, Mr. Barnard found a valuable collection of works, in foreign languages, on deaf-mute instruction. He gave himself to the perusal of these with avidity; and was thus led to enter upon a course of metaphysical study, and of investigation of the philosophy of language, which soon possessed for him all the fascination which the mathematics had exercised before. He published articles on the history and philosophy of the education of the deaf and dumb, in several of the higher periodicals of the day, as the "*North American Review*," the "*Christian Spectator*," and the "*Biblical Repository;*" and he prepared many able documents on the subject for the institution itself. The subject of grammar, of which the memories of his childhood were any thing but pleasing, became, at this time, so favorite with him, that he published a treatise of his own, entitled "*Analytic Grammar, with Symbolic Illustration*," in which the structure of language and the relations of the words which make connected speech, were visibly symbolified. The treatise found much favor with the philosophic, and would probably have come into general use as a school book, but for its association with a special department of education, and the impression that it was designed for learners wanting in one of the most important of the senses.

While pursuing these studies and prosecuting these labors, Mr. Barnard did not forget the favorite pursuits of previous years. Besides keeping alive his interest in mathematics, he engaged in the study of physical science, and became an assiduous observer of meteorological phenomena, including those of the aurora borealis, the zodiacal light, and shooting stars. Upon these, especially those of the first and last class, he made many observations, in concert with Mr. E. C. Herrick, the well-known meteorologist of New Haven. Some contributions of this date may be found, from him, in the "*American Journal of Science.*" He also prepared and published, about this time, in the "*American Monthly Magazine*," of New York, to which he was a

contributor, a summary of the existing state of electrical science, as connected with magnetism.

In the latter part of 1837, Mr. Barnard was elected to the professorship of mathematics and natural philosophy in the University of Alabama; and, on his way, he stopped at Richmond, Virginia, to advocate, before the legislature of that state, an institution for the deaf and dumb. There he encountered Dr. S. G. Howe, of Boston, who was there on a similar errand, in behalf of the blind. It was agreed that the friends of the two measures should unite their efforts; and the result of this union was the erection of the institution now in operation at Staunton, in which instruction is given, in different departments, both to the deaf and dumb and the blind.

Mr. Barnard entered upon his duties in Alabama, in the spring of 1838. During this year, he prepared and published "*The Alabama State Almanac for* 1839," which he designed to make a vehicle of scientific information, as well as a calendar, and a register of statistical matters, and other matters of fact. The astronomical computations were by himself, unassisted; and the remaining contents, also, mainly by himself, were interesting and valuable; but the sale did not repay the very considerable expense of publishing such a work in Tuscaloosa; and it was, therefore, impossible to continue it. A literary magazine, entitled "*The Southron*," having sprung up about the same time, was mainly sustained by the contributions of Prof. Barnard, and two gentlemen, both of whom have since become pretty widely known to the country, Hon. A. B. Meek and Hon. W. R. Smith. For a number of years, also, Prof. Barnard was the unavowed editor of "*The Independent Monitor*," a weekly newspaper, printed in Tuscaloosa; and, during this time, his pen was excessively prolific, and was employed on a wide range of subjects. As an editor, his writings were marked by a cheerful vein, mingled with a constant flow of humor; and no oracle of the tripod has probably ever been more favorite in Alabama, than he. He contributed, also, occasionally, and for a time regularly, to the other weekly newspaper in Tuscaloosa, the "*Observer*."

While in Alabama, Prof. Barnard published a new arithmetic, which came, for a time, into pretty general use in that state. He also directed the construction of the astronomical observatory of the University of Alabama; but, owing to his subsequent acceptance of the chair of chemistry in the university, it did not continue to be under his management. He was frequently called upon to deliver public addresses, on occasions of interest. One of these was in commemoration of the "*Life and Public Services of Hon. W. R. King*,"

pronounced in compliance with a request tendered by the citizens of Tuscaloosa, irrespective of party. Another, which was published, and which was very flatteringly noticed, in many quarters, was an oration before the Alabama Alpha of the Phi Beta Kappa Society, upon the subject of "*Art Culture*." He also lectured repeatedly, on scientific subjects, before popular audiences, in Tuscaloosa, and elsewhere; and, on several occasions, commanded crowded audiences, in the state house, during the sessions of the legislature.

On the publication of the accounts of the photographic discovery of Daguerre, Mr. Barnard, even before the processes were disclosed, entered zealously upon a series of experiments, relating to the art; and he very early addressed a communication to the "*Journal of Science*," giving a mode of preparing plates, by the use of chlorine gas, of such sensitiveness, as to receive an instantaneous impression. Such methods were, about the same time, introduced elsewhere; but the reagent employed was different; and Mr. Dana, in acknowledging the communication, stated that it was the first account that had appeared, of the successful application of chlorine to this interesting art.

In the year 1846, a joint commission was appointed, on the part of the states of Alabama and Florida, for the purpose of settling the boundary line between their territories, which had always been in dispute. This boundary is the treaty line between Spain and the United States, which was run between the years 1796 and 1799; and should be the 31st parallel of latitude. The commissioners, on both sides, were to be assisted by astronomers and surveyors, appointed in the interest of the several states. Prof. Barnard was appointed, by Gov. Martin, as astronomer on behalf of the State of Alabama. The parties met on the banks of the Chattahoochee, at the disputed line, in November, 1846. The astronomer appointed on the part of Florida, failed to appear; and Prof. Barnard was accordingly appointed on the part of that state, also. After the necessary observations had been made at the Chattahoochee, and as far from the river as was thought necessary, the commissioners resolved to commit the entire remaining part of the examination to Prof. Barnard and his assistants, alone; and he accordingly proceeded along the line, from the Chattahoochee to the Perdido, and thence into Alabama, to the Tensaw; the monuments being found still to exist along the parallel, all the way to the Mississippi River. His report on the results of the examination, which was laid before both legislatures, had the effect to settle the controversy immediately.

In the year 1848, the chair of chemistry in the university became

vacant; and Prof. Barnard was induced to accept it. He immediately gave a great development to the system of instruction in that science, as it had been previously conducted in that institution, or rather remodeled the system entirely; introducing experimental illustration, on the most ample scale. Desirous, also, of enlarging the usefulness of the university, as well as of introducing a species of influence, favorable to the manners of the students, he invited the young ladies of the Female Institute of Tuscaloosa (there being at that time but one seminary for young ladies in that city, where there are now four, all of them flourishing,) as well as the ladies of the city, generally, to attend his lectures, at the laboratory; an invitation which caused his lecture room to be much frequented, and often to be thronged to excess.

During the period in which he held this professorship, he continued to cultivate his mathematical studies; and among other evidences which he gave of this, may be instanced a series of papers in the "*American Journal of Science*," on the subject of the Mechanical Theory of Heat, and the conditions essential to the success of engines driven by heated air.

In the fall of 1853, he was appointed a juror in the Exhibition of the World's Industry, held in New York City; but was delayed in attendance, until the jury to which he was attached had completed its labors.

In the year 1855, the British Association for the Advancement of Science extended special invitations to a limited number of the men of science of America, to attend their annual meeting, held that year in in Glasgow. Mr. Barnard received the compliment of one of these invitations, but was unable to attend.

During the latter part of his connection with the University of Alabama, some of the friends of that institution set on foot a project for the remodeling of the system of instruction, in such a manner as to leave to every student the free option to select for himself the studies he would pursue. This scheme alarmed the friends of sound education in Alabama, especially when it began to appear that strenuous efforts were making, through the press, to prepossess the popular opinion in favor of the change. These, therefore, resorted to the same channel for disabusing the public mind of error, which had been employed to propagate it; and accordingly a very animated discussion occupied the columns of many of the papers of the state, for several months. In this discussion, Mr. Barnard took a very active and zealous part, in vindication of the time-honored system, which was threatened with destruction; and his articles produced a very perceptible impression

upon the conductors of the press, no less than upon public sentiment generally; and were probably more instrumental than any other, in arresting the tendency to favor the spirit of destructiveness, which was beginning to be very distinctly manifested.

In obedience to a requisition of the board of trustees of the University, communicated to the faculty in July, 1853, a committee of the faculty was appointed to report a plan of reorganization, in conformity with the views of the advocates of change. Of this committee Mr. Barnard was chairman. The committee, in conformity with instructions, reported such a plan as had been required of them; but the majority of the committee, consisting of Prof. Barnard and Prof. J. W. Pratt, presented an additional report, embodying an elaborate examination of the plan, and its emphatic condemnation. In this report, which was drawn up by Prof. Barnard, the expediency of the proposed innovation is examined in the light of the experience of those institutions which have given it a full or a partial trial; and it is shown, by an extensive collation of facts, to have resulted in practical failure, in nearly every such instance. The plan, however, is more uncompromisingly condemned, upon higher and purely philosophic grounds, drawn from a consideration of the objects of educational discipline; and the dangerous fallacy which underlies the popular objection to many collegiate studies, viz., that they are not practical, is energetically exposed. The report concludes with the citation of the written opinions of many of the ablest educators in the country, upon the point in discussion, which are shown to be, with singular unanimity, hostile to the proposed innovation.

Some passages in the report are sufficiently remarkable to deserve citation here. The following tribute to the value of classical learning, carries with it the more weight, as coming from a man whose natural tastes had inclined him almost exclusively to the cultivation of science, and whose professional pursuits might have been supposed likely to make him forgetful of the amenities or the uses of literary study:—

> If the study of language generally has the value which is here claimed for it, that of the languages of ancient Rome and Greece possesses this merit in an eminent degree. In them those principles of the philosophy of speech, to which allusion has been made, and which constitute in their systematized form the science of general grammar, are more perfectly and more happily illustrated, than in any other known tongues, living or dead. And not only is it true that, as languages, they thus furnish, to the linguistic philosopher, the most interesting, as they do at the same time, to the youthful student, the most improving of all the subjects embraced in this department of knowledge; but, also, it most fortunately happens, that their literature presents the happiest examples of language in its proper use—the most unexceptionable models of historical, dramatic, poetical, metaphysical, and oratorical composition, that the world has ever seen. We have, then, in the Greek and Roman tongues, the instrument of human thought in its most perfect

form; and, in the Greek and Roman classic authors, the application and the uses of the instrument, in their most admirable and elegant illustrations. So strongly have these considerations impressed the educators—it may almost be said universally—of all modern time, that the perpetually recurring cry of the "practical men" of the entire century which precedes us—*Cui bono?* what will all this Latin and Greek do for us in the business of spinning cotton and raising potatoes?—has been of no avail whatever to dislodge the classics from our colleges, or even to unsettle the firmness of the tenure by which they maintain their prescriptive prominence there. In view of these considerations, how empty and shallow does all this revolutionary clamor appear! And of how utterly trivial importance is it, whether the student, who has experienced the inestimable benefits which spring from a thorough study of the "Humane Letters," remembers, or fails to remember, through all his after life, the mere facts of knowledge which, as necessary incidentals to this training, he picked up during his student career!

After some further examination of the specific modes in which classical study benefits the learner, and after the citation of the opinions of distinguished educators on the subject, the report proceeds:—

But while thus the value of classical study, in the subjective influence it exercises upon the student, is vindicated not only by a consideration of the nature of the study itself, but also by the testimony of judicious educators every where, even of those who have consented to its optional banishment from the college curriculum, it is not difficult, after all, to disprove the assertion, so frequently and so flippantly made, that the knowledge which this species of study furnishes to the youth is without any practical use in later life. And here, in employing the words, practical use, the undersigned would not be understood to intend a use so intensely and literally and materially practical, as to manifest itself in superiority of skill in planting cotton, or unusual wisdom in managing stock; for, if a test so gross is to be applied to the attainments of the scholar in every department, many other branches of learning, besides the ancient classics, will fall under the ban. But if propriety of speech, ease, and copiousness of expression, and those various graces of conversation, which distinguish the man of letters, may be regarded as practical benefits to their possessor; if the greater respect which they enable him to command from his surrounding fellow men, is a tribute worth receiving; if the substantial addition to his influence over others, and to his power of benefiting mankind, which they bestow, be not a thing to be despised; then will the man, in whose youthful culture the ancient classics have not been overlooked, carry with him, to the latest day of his life, advantages derived from their study, which no sordid computation of dollars and cents can ever adequately represent.

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And, on this point, it may finally be added that, in the present state of the world's literature, some familiarity with the classic authors of Greece and Rome is, to any man who aspires to the name of a scholar, simply a necessity. The literature of all modern Europe is inextricably interwoven with that of Greece and Rome—and our own no less than every other. We can not be literary men, and yet be ignorant of the classics. The idea is utterly preposterous; and all the attempts to decry the ancient learning, by representing it as so much "learned lumber," and thus endeavoring to bring it into disrepute, will have no other effect than to awaken the suspicion, or establish the certainty, that their originators are no better scholars than they should be, themselves.

Is it possible, then, that the trustees of this university will deliberately resolve to award the honor of graduation, to confer the diploma, which, from the earliest history of colleges, has been recognized only as the certificate of genuine scholarship, upon men who willfully neglect that which always has been, and inevitably always must be, the first essential to the scholar? Is it possible that they will do this ruinous thing, at a time when the university is in the enjoyment of a sound and healthy prosperity, such as it never has experienced before; and such as, to all who have been familiar with the early history of other colleges, is not only satisfactory, but highly encouraging? Is it possible that they will do it, with the evidence before them of an entirely tranquil contentment pervading the whole people, in regard to the system of instruction in operation here; and in view of the fact

that the proposition for a change, published every where throughout the state, has awakened only an occasional and feeble response; while it has, at the same time, elicited from the scattered friends of sound education so numerous, and elaborate, and able vindications of the existing order of things, as to prove, beyond all question, that the sound sense of the people is satisfied with what we have, and asks for nothing better? Is it possible that they will do this, and, in doing so, substitute, in place of a tried and approved system, one which has not even the guaranty of past success to recommend it; but which is actually, in spite of all impressions heretofore existing to the contrary, unpopular at home, and which has, in point of fact, already broken down in every other institution which has attempted to borrow it? Surely this can not be.

One of the striking points made by the report is, that the University of Virginia, which is so often referred to in evidence of the popularity of the "open system" of university teaching, furnishes in its published catalogues conclusive evidence that this system, in so far as relates to under-graduate instruction, is unpopular in the State of Virginia itself. The report states that:—

The catalogue of the University of Virginia, last published (for 1853–54,) shows a total of students, belonging to Virginia, of 289.* But, as a considerable number of these are students of law and medicine, they certainly, in a comparison like this, are not to be counted. By a careful enumeration, it appears that the number of these professional students, belonging to Virginia, is 126. The students in the department of arts are, therefore, only 163. According to the United States Census for 1850, the total white population of Virginia was, in that year, 894,800. The same authority gives the total white population of Alabama, at the same time, as 426,514. According to these figures, if the University of Virginia is prosperous while the state furnishes it *one hundred and sixty-three* students of arts, ours ought to be equally so, so long as we have as many as *seventy-seven*. But the catalogue of the University of Alabama, published last November, contains the names of *ninety-eight* students of arts from Alabama; and, if we add those who were admitted after the publication of the catalogue, we shall have *one hundred and seven*. Is there any ground, then, for asserting that our numbers are feeble; or that Alabama does not patronize her own university as well as other states do theirs? Should the assertion be still adhered to, it can be established only by comparison with some state institution in which the close, instead of the open, system of instruction is maintained; and hence the whole inference, which it has been sought to derive from this fact, will fall to the ground.

In truth, the comparison just made is most disastrous to the claims of the Virginia system, as it respects its actual popularity. For, be it observed, a main reason why we are urged to adopt that system is, that the existing one is so hopelessly unpopular as to render some destructive outbreak in the legislature, or among the people, all but absolutely inevitable. Yet, unpopular as it is (if these assumptions are true,) it is manifestly, as the figures themselves show, nearly fifty per cent. more popular in Alabama, than the system of the Virginia University is in Virginia.

Further on in this report, the argument is resumed, as follows:—

The very small number of students of arts furnished by Virginia to her own university, as has already been shown earlier in this report, is evidence enough that the system has not the approbation of Virginians themselves. This fact will appear more unanswerably true, if we extend the comparison to other colleges, where the close system is severely carried out. The College of South Carolina, for instance, exhibits a list of 189 under-graduates for the collegiate year 1853–54, of whom 175 are furnished by the State of South Carolina itself. The total

* The total number of students in the University of Virginia, during the year, from all the states which furnished to it students, was much greater than this. The nature of the argument required the comparison to be confined, however, to Virginia alone.

white population of the state, according to the census of 1850, is 274,563; while that of Virginia, as already stated, is 894,800, furnishing only 163 students of arts to the State University. If South Carolina patronized her college no better than Virginia does her university (the professional schools apart,) she would send to Columbia but fifty students instead of 175. The South Carolina College is one of some standing in years. Let us take another, also maintaining rigidly the close system, which has been in operation only for a limited period—the University of Mississippi. The total number of students on the catalogue of this institution for the past year is 158; from which, subtracting all but those whose residences are in the state, and who are pursuing the regular under-graduate course, we shall have 134, upon a population of 295,718. Yet, if Mississippi were no more partial to the course of education in her university than Virginia seems to be to that which hers has adopted, she would furnish to it only fifty-three undergraduate students.

In the following table are presented the results of similar calculations for a number of colleges, whose catalogues happen to be at hand. The dates are the latest accessible, and are all recent. In the first column are placed the number of under-graduates which each state would furnish to the college belonging to it, if it furnished the same number, in proportion to population, which Virginia furnishes to her university; and in the second are placed the actual members present, as given in the several catalogues, excluding all from other states, and all who are not regular under-graduates:—

	Proportional Number.	Actual Number.
University of Virginia,	163	163
University of Alabama,	77	107
South Carolina College,	50	175
University of Mississippi,	53	134
University of Georgia,	95	107
University of North Carolina,	100	139
Yale College,	66	135
Harvard University,	178	238
Dartmouth College,	57	160

It appears to the undersigned that facts of this nature, and which admit of being multiplied to a much greater extent, combine to furnish an absolute demonstration that the system of instruction practiced at the University of Virginia is, for students not attending the professional schools, absolutely out of favor and unpopular where it is best known—in the State of Virginia itself. It appears that not one single consideration exists to encourage the belief that that system, transplanted here, would be any more favorite with the people of Alabama than it is in Virginia. It appears that, though the name has become a popular catchword among those who have urged the remodeling of our own State University, yet the reality which it represents is not at all that thing which it is evidently here supposed to be; and that its introduction with us could only lead to immediate disappointment, and ultimate dissatisfaction and disgust.

The faculty of the University of Alabama, to whom this report of the majority of their committee was read, directed it to be presented to the board of trustees. It was accordingly read before that body, at a special meeting, held toward the close of September, 1854. The board, some of the members of which had been partially committed to the view that some modification or other ought to be introduced into the plan of instruction; and being at the same time convinced of the injudiciousness of adopting the proposed radical measure of change; fell, in the end, upon a sort of compromise, by which, without touching, or in any way impairing, the system of previous years, they endeavored to throw the university more widely open than before to students who should desire to select their own studies. The

regular classes, and the four years' course, were suffered to stand, but the names of the classes were changed from freshman, sophomore, &c., to "class of the first year," "class of the second year," &c.; and the hours of recitation were so arranged as to permit a student, not a member of a regular class, to recite in such subjects as he should choose to select. Professor Barnard, though with reason abundantly satisfied with the substantial success which had crowned the exertions of himself and his associates in this severely contested struggle, yet regarded even the trivial concession which had been made to the spirit of change as an error, and predicted that its advocates would themselves be early convinced of the fact. The prediction was fully realized, even earlier than he had imagined; the university having abandoned the experiment at the end of the third year, and returned, in all particulars, to the system which existed before the change.

During the same year, 1854, the subject of college government was discussed in the public journals of Alabama, with an animation hardly less warm than that which had marked the struggle in regard to systems of instruction. Grave exceptions were taken to the disciplinary code, as it at that time stood; and suggestions were thrown out for its improvement, such as, for the most part, served only to illustrate the want of practical knowledge, on the part of the censors, of the subject which they undertook to treat. To some of these suggestions Mr. Barnard was led to reply, in a letter addressed to Hon. A. B. Meek, one of the editors of the "*Mobile Register*." Having once broken ground on the subject, however, he followed it up in a series of communications, addressed to the same gentleman, in which he undertook to show that the complaints, so often heard on the subject of collegiate discipline, ascribe the evils which exist to erroneous causes altogether, and fail to recognize the true causes, which are simply the isolation of the youthful community, its immunity from the restraints of public opinion, and its practical freedom from the ordinary operations of municipal law. He maintained, with earnest emphasis, that nearly all the vice which college associations engender, and by far the greater part of the troubles with which college government is embarrassed, grow out of our perpetuation of a system which originated in a different age, and in a different state of society, from that in which we live; which was, in its origin, surrounded by securities which we have totally discarded, and can not resume, if we would; and which compels us to profess to exercise a degree of moral restraint over young men, which we have no means to make effectual. What is called the "dormitory system" is therefore regarded by Mr. Barnard as containing in it the source of most of the evils

encountered in the management of colleges; and for these evils he sees no effectual remedy, short of the abandonment of the system itself. The practical difficulty which prevents the application of the remedy—immediately, at least—in the case of the greater part of the collegiate institutions of the country, is to be found in their location in small villages, or in positions entirely isolated, where students can not obtain accommodations, except such as the dormitories afford. The original selection of such locations, Mr. Barnard regards as an error of great magnitude. It seems to have been occasioned by a prevalent impression in regard to the freedom of such locations from temptations to idleness or vice, which he looks upon as quite illusory; but it has entailed upon the institutions themselves many disadvantages and embarrassments, which are very palpable and real.

The impression produced by these letters upon the friends of education in Alabama, and elsewhere, was such as to occasion a demand for their republication, in a more permanent form. They were therefore collected, and, with some slight revision, given to the public, in a thick pamphlet, in December, 1854.

While these matters were occupying the thoughts and the pen of Mr. Barnard, he engaged also, with much zeal, in the advocacy of projects of internal improvement, by which the rich resources of central and northern Alabama might be brought into communication with markets, and so rendered available. Upon this general subject, and upon particular schemes for connecting Tuscaloosa and the country north of it with the sea-board, he prepared and published many forcibly-argued papers; and he, at the same time, availed himself of opportunities offered by railroad conventions, and other public meetings, to address the people, in person, upon the same topics. During the summer of 1854, he also published a series of papers, in one of the daily journals of New Orleans, earnestly urging the importance of an air-line of communication, between that city and Chattanooga, Tennessee; by which the air-line chain, extending from Maine to Louisiana, would be completed. The portion of this work within the State of Alabama, is now under construction; the extension through Mississippi to New Orleans, remains to be undertaken.

In the month of September, 1854, Mr. Barnard was elected to the professorship of mathematics and natural philosophy in the University of Mississippi, at Oxford. This was an infant institution, which had been in operation only six years; having been established on the foundation of a donation of lands made in trust, by congress, to the legislature of Mississippi for the purpose, at the time of the admission of the state into the Union, in 1817. The state had sold the lands many years

ago, and had received the proceeds into the public treasury. From time to time, laws had been passed, providing for the periodical statement of the account between the treasury and the seminary fund; but these laws had been but imperfectly complied with; and, during the long period which had elapsed without any measures having been set on foot to carry out the intention of congress in making the donation, the whole subject had become so perplexed, that no one at this time (1854,) definitely knew what was the actual state of the case.

At the time of Mr. Barnard's election to his chair, the university was greatly in need of funds. Its buildings were wanting in extent of accommodations, and in arrangements convenient for experimental instruction in science. Its library was small, its apparatus imperfect and deficient, and its collections in mineralogy, geology, and natural history, extremely meager. The necessity was apparent to the board of trustees, of applying to the legislature for relief; and this was brought the more strongly to their convictions by Mr. Barnard's urgent representations of the wants of the scientific departments, and the importance of greatly enlarging the library. The trustees, therefore, at their meeting in July, 1855, appointed a committee to memorialize the legislature; and the duty of preparing the memorial was assigned to Mr. Barnard. In this document, which is carefully drawn up, and condensed as far as practicable, consistently with its design, the argument in favor of extending a liberal support to the university of the state, considered as the prime mover in the educational system, is strongly presented; and the specific defects existing in the institution at the time, and for the supply of which funds were urgently needed, are pointed out, with such explanation as to make the urgency of the case obvious. The memorial produced an impression strongly favorable; and this impression was strengthened and enforced by an oral argument, addressed to the members of both houses, in the representatives' hall, by Prof. Barnard, at the request of the trustees, during the session of the legislature. While this memorial was pending, however, the board resolved to make a thorough investigation into the condition of the seminary fund; and a committee of the body was occupied for several days, in ascertaining what balance, under the existing laws, ought to be due to it, on the books of the treasury. In these labors they were assisted by Prof. Barnard, who was indefatigable in the zeal of his co-operation, and by whom the results of the investigation, exhibiting a large balance to the credit of the fund, were finally condensed into a succinct and satisfactory statement. This statement, having been reported to the governor, by the president of the board, was thought by him

to be of sufficient importance, to justify him in laying it before the legislature in a special message, which he accordingly did, in the month of February, 1856. The immediate consequence of all these efforts was the passage of a law, appropriating to the university $20,000 per annum, in addition to its existing income, for five years.

With the increased means thus secured, the board proceeded to make rapid and extensive improvements in the university, showing in the various measures, which they adopted for this purpose, great consideration to the recommendations of Prof. Barnard. Within less than three years, the time which has since elapsed, they have placed the university, in regard to its internal arrangements, to its scientific collections, and to its appliances generally for furnishing the ambitious student with the largest advantages for the acquisition of knowledge, on a level with the best institutions of its class in the United States.

In the summer of 1855, Prof. Barnard was selected by the president of the American Association for the Advancement of Education, Prof. A. D. Banks, to prepare a paper on the subject of the "Improvements Practicable in American Colleges," for presentation at the annual meeting of the association, in August, of that year. This paper, which was published among the proceedings of the association, and in the "*American Journal of Education*,"* received wide approval and commendation for the judiciousness of its suggestions, and was reviewed, with strong expressions of approval, in the "*Southern Quarterly Review*," in an article, understood to be from the pen of the accomplished editor, Dr. Thornwell.

In the summer of 1856, the presidency of the university fell vacant, by the resignation of Dr. Longstreet, who had filled it successfully for seven years; and Prof. Barnard was elected to succeed him. He entered upon his new office, under circumstances of peculiar delicacy; and it was anticipated, by all who were on the ground, that his administration would have, at the outset, to contend with difficulties of no ordinary magnitude. The anticipation was verified in the amplest manner. But, in spite of sectarian feeling, excited to its utmost pitch against him, by men who sought to bring the university under denominational influence; and of the unscrupulous and untiring assaults by a notorious and infamous pretender to science, who, after his ejection from a chair in the university, sought to gratify his malignity by venting the most atrocious slanders and libels upon the personal character of Dr. Barnard; and although the systems of discipline and instruction, which it was the purpose of the new president to introduce into the university, were misapprehended by some, and misrep-

* Vol. I., p. 174.

resented by others; his plans for the improvement and development of the university have begun to bear fruit; and many of those who, through the efforts of interested persons, were once strongly prejudiced against him, and his system of university education, are now among the warmest of his admirers and supporters.

At the close of the year 1856, President Barnard delivered a lecture to the graduating class of that year, on the subject of the *Relations which exist between the education of the University and that of Common Schools.* In this lecture, which was published at the request of the class, we have a condensed statement of views which it has been the practice of the author, for many years, to inculcate constantly upon those who have received instruction at his hands, in regard to the duties which, as members of society, they owe to the great cause of education. He exhorts them never to forget the claims of the institution in which they were themselves educated, and never to relax in effort for the elevation of the university to the highest level, whether in regard to intellectual character, or to its material means of usefulness; but to remember, above all, that this usefulness is not limited to the direct agency of the institution, in imparting knowledge to the comparatively small number who resort to it, to obtain personal instruction within its walls; but is felt far more widely, and to far more beneficial purpose, through its indirect action upon the minds of the whole people; by setting in motion, and keeping in efficient operation, a system of universal education, for which it supplies the stimulus and furnishes the laboring men. He therefore earnestly desires them, while they vigorously persevere in their active support of the higher education, in the university of their native state especially, yet, by all means, to rest their support on the broad principles of universal philanthropy; and to sustain the university, because, in so doing, they contribute, more efficiently than they can do in any other way, to the education of the whole people.

The second year of President Barnard's administration, recently closed, has been one of remarkable success. His power of controlling young men has been exemplified in the good order which has prevailed, throughout the session, among the students of the university—a degree of order never previously existing there; while the grade of scholarship has also been materially elevated and improved. These results, achieved in so short a time, and in the face of so many adverse circumstances, are justly regarded by his friends, and by the literary public, as demonstrations of his peculiar fitness for the discharge of the administrative duties pertaining to his position.

During this year, President Barnard brought distinctly before the

trustees of the university, and the public, a plan which he had long cherished in his own mind, to elevate the university, in the grade of its teaching and in the character of its aims, to a level correspondent to the assumption of its name; to put it, in brief, in the way to become, just as rapidly as the educational wants of the country shall demand, an university in the European sense of the term. This plan he unfolded in a printed letter, addressed to the board of trustees, and extending to more than one hundred octavo pages.

A large edition of the letter was speedily exhausted by the calls made for it from every portion of the state, and the board of trustees, at their meeting in July last, were so impressed with the importance of the views presented in the letter, that they ordered the printing of another and larger edition, by the following resolutions:—

Whereas, In the opinion of the board of trustees, the recommendations contained in the printed letter of President Barnard, submitted at the present meeting of the board, as to changes to be made in the course of instruction in the university, the general views of which are approved, deserve a deliberate examination; therefore, be it

Resolved, That a committee of five be appointed to confer with the president, and with him to devise a plan for carrying into effect the suggestions contained in his letter; and report to the next annual meeting of this board, the course of study and organization of the several departments, best calculated to secure the object therein indicated.

Whereas, In the opinion of this board, the letter recently addressed to the board, through the press, by President Barnard, contains matter which ought to be universally diffused among the friends of education, and especially among the people of Mississippi; be it

Resolved, That *one thousand* copies of said letter be printed for the use of the board, and for general distribution.

The letter has attracted much attention at the hands of distinguished gentlemen throughout the country, who are themselves engaged in the work of education, and their numerous commendatory letters, addressed to its author, afford an ample and gratifying testimony in corroboration of the soundness of his views. A committee of the board of trustees has been charged with the duty of investigating and reporting upon the proposed changes advocated in the letter.

President Barnard has, all his life, possessed a great proclivity to mechanical invention. In his boyhood, he was constantly engaged in the construction of some species of mechanical contrivance, and the propensity has never disappeared. At the meeting of the American Association for the Advancement of Science, held in Baltimore, in April, 1858, he presented a description of an electric clock, constructed, according to his designs, by Ritchie, of Boston. In this very beautiful piece of mechanism, the pendulum receives its impulse from two small weights, alternately raised by magnetic power, while the pendulum itself is entirely free. So long ago as the year 1848, he

invented a printing telegraph, capable of performing with greater rapidity than any in use; each letter requiring, for its production, but a single electric impulse, instead of such a succession as is necessary in the instruments which allow all the intervening letters to escape, one by one, before that which is desired can be reached. The instrument, however, required the use of the relay magnet and local battery, which were covered by Morse's patent; and it has never, therefore, been brought into use.

In the year 1854, President Barnard was admitted to deacon's orders in the ministry of the Protestant Episcopal church, by the Rt. Rev. Bishop Cobbs, of Alabama; and, in 1855, he was ordained a presbyter in the same church, by Rt. Rev. Bishop Green, of Mississippi. On his removal to Oxford, the parish in that village naturally fell under his charge, and he has continued to hold the rectorship up to this time—preaching, ordinarily, on two Sundays in each month. How he finds the time, in the midst of so many and such engrossing avocations, for the preparation of his pulpit discourses, is a standing surprise to all who are aware of the number and extent of his various employments. As a composition, each of his sermons seems to have been as elaborately finished, as though the toil of weeks had been bestowed upon it; and yet, it is known that his sermons are actually prepared in the course of a few brief hours, during which he is often liable to interruption. His sermons display, also, a range of theological reading, whose breadth might well excite the astonishment of those who know how recently he has taken holy orders. Indeed, to listen to him in the pulpit, no one would suppose him to be a comparatively unpracticed clergyman; and all who can appreciate sincere and glowing piety, set forth and advanced with rare felicity of style, clearness of statement, force of logic, and poetic beauty of illustration, must regret that talents like his have not been exclusively devoted to the church.

It has been said of him, that the most remarkable characteristic of his mind, is his versatility. In all the various walks of letters and science which he has at different times pursued, he seems equally at home. He has evidently been "doing one thing at a time," during all his life; and has made it a rule to exhaust every subject of investigation, before he laid it aside. Whatever he has once mastered, he has retained with such a freshness of recollection that, seemingly without mental effort, he passes from subject to subject, without embarrassment, or confusion of ideas, and calmly draws forth from his mental treasures "things new and old," as the exigences of the moment may require.

The "*Letter*" which President Barnard addressed to the board of trustees of the University of Mississippi, in 1858, is so full of suggestions of the highest practical importance to the efficiency and fuller development of our American collegiate and university system, that we must enrich our pages with a few extracts.

In this, as in his former publications on the subject, the writer claims that the expansion of the range of studies, without extending the time in which these studies are to be pursued, has impaired the efficiency of the system, in its original and legitimate aim—the discipline and training of the intellectual powers—without giving to the students a thorough mastery of any one of the many new subjects introduced. This evil he attributes, not to the inefficiency of the professors, or to their defective methods of instruction, but to the system itself.

The evil has been the growth of years. It has accumulated by degrees almost imperceptible. Each successive addition has probably seemed inconsiderable to those who made it, but the united sum has become intolerable. Could it, in the nature of things, have been possible that a proposition should at any one time have been made for a sudden change from the system, as it existed a century ago, to the system of to-day, it is inconceivable that it should have been entertained by enlightened educators for a moment.

To relieve the course of under-graduate study in our colleges of some part of its excessive burthen, and at the same time to meet the demands of the age for instruction in the studies which have been introduced, President Barnard proposes to divide the studies into distinct and separate courses—a sub-graduate and a post-graduate department.

The sub-graduate course may be defined by the very simple process of excluding from the curriculum of study, as it stands at present, all those branches of science which are confessedly modern additions, and, along with these, the modern languages. This course will, therefore, as reconstructed, embrace the English, Latin, and Greek languages, all the elementary branches of the pure mathematics, the mechanical branches of natural philosophy, logic, rhetoric, the principles of criticism, moral and mental philosophy, composition, and elocution. These several branches of study are to be pursued to something like the extent, and with something like the thoroughness, contemplated in the earlier period of the history of our collegiate instruction. To these it may not be thought improper to add, during the concluding year, succinct expository courses in chemistry and the subjects of natural philosophy, not strictly mechanical; these topics being taught avowedly in outline only, and not as matters to be embraced in the examination for the Bachelor's degree.

To the post-graduate department, may be turned over those branches of science and letters which are excluded from the former, and which are confessedly, at present, but imperfectly taught; and the number of these may, from time to time, be increased, by adding new ones, as the wants of the public and the growing resources of the university may demand or justify. Thus it *may* immediately include astronomy, geology, mineralogy, chemistry, natural philosophy, meteorology, civil engineering, the higher branches of the pure mathematics, Greek and Roman letters, the modern languages and their literature, political economy, international law, constitutional law, and the history of philosophy; but it probably *will* include, at first, only such of this list as are most practical in their nature. As, in creating this department, the design should be, from the beginning, to build

up here ultimately a university in the largest acceptation of that term, it is to be expected that, in the progress of years, schools of agriculture, of natural history, of medical science, of civil and political history, &c., &c.

The post-graduate department is to be open to all who may wish to go thoroughly to the bottom of any subject which the university proposes to teach, and for which he has prepared himself in school, or by private study; but the master's degree is not to be conferred upon any one who has not graduated as Bachelor of Arts, in this or some other college. When students of mature minds resort, of their own option, to a school of higher learning, like that contemplated, it is presumed they will be in earnest in the pursuit of knowledge.

The above assumption can not safely be made of the body of the under-graduates of our colleges. Nor is it difficult to find reasons for a fact of so general observation. One of these is, doubtless, the immaturity of the youthful student himself; in consequence of which, he is yet to learn both the importance of mental culture, and the value of positive knowledge. Another is presented in the circumstance that the under-graduate student is not always, perhaps not usually, a member of an institution of learning, entirely of his own voluntary choice; but that he has become such, in compliance with the wishes of his parents and friends; often with no other feeling on his own part than a desire to make his college life pass away as agreeably as circumstances will allow; a desire which does not always prompt him to seek for enjoyment by the most rational means.

In the higher department, or post-graduate course, of the university, President Barnard proposes to employ the plan of daily recitation only to a limited extent, and to resort mainly to oral exposition on the part of the teacher.

According to Sir William Hamilton, all instruction was originally given, in the universities of England, as it continues to be in the continental universities, by lecture. The colleges and halls, which now monopolize the principal work of teaching in those venerable institutions, were erected to provide for the physical wants of the students, and to secure a vigilant supervision over their morals. The officers, called tutors, employed by the colleges for the latter purpose, gradually took upon themselves the character of instructors, by exacting from the youth under their charge, a repetition of what they had learned in the public lecture-halls. To this kind of recitation, they subsequently added recitation from books. The evident design of the exercise, in its origin, was that in which we find its chief utility at present—to insure the attention of the pupil to the subject which he is required to know. The distinctive name given by the French, to the officer whose duty it is merely to hear recitations, makes it sufficiently evident what idea is associated with the exercise by them. This name—*répétiteur*—suggests to the mind the bare repetition of a task, as that which it is the business of the officer to secure. * * *

All that Melancthon has said, all that Hamilton has said, all that any panegyrist of the system of daily examination, as a means of instruction, has said, in regard to the incidental advantages growing out of the method, is admitted without any hesitation. It stimulates emulation, it cultivates self-possession, it encourages or enforces precision of speech, it abates conceit, it convinces of deficiency. But all these resultant benefits presume the immaturity of the learner; and most of them presume, furthermore, that an unceasing constraint is necessary to compel him to profit by the instructions he receives. * * *

It will be conceded that, considered as an instructive, and not as a coercive method, the system of daily examination is attended with some incidental advantages, besides those which have just been enumerated. It is a possibility that a student, who has failed to comprehend some point embraced in the text of his lesson, may be enlightened, by listening to the performance of a fellow-student. It

is also a possibility, or rather a fact of frequent occurrence, that the imperfect performance of an individual scholar, may indicate to the instructor the deficiencies of that individual, and so elicit explanatory comments or illustrations. It is further true, that the instructor may volunteer explanations and elucidations of points of difficulty, even though occasion may not arise to force their introduction.

An acute instructor, moreover, by the ingenious selection of interrogatories, will bring out the weak points of a pupil, as a lawyer does those of a witness; or will bring into prominent relief the points of the subjects under consideration, which are of highest importance. But, beyond this, it is certainly true, that it is only in so far as, for whatever reason, the instructor does actually superadd his own teachings to the text of the lesson, that any talents or attainments, which may belong to him personally, can be of any sort of use to his pupils. For all the purposes of *mere* recitation, any man, who is capable of understanding what the pupil says, and of reading the book or books from which he has learned it, so as to compare the performance with the text, is as good and as capable a presiding officer and examiner in a class-room, as any other. The teacher, therefore, who meets his classes for no purpose at any time but to "hear their recitations," is not really a teacher, except in so far as he ingrafts upon this exercise the expository feature which is the distinguishing characteristic of the plan of instruction by lecture. To do this, however, to any extent, in the recitation-room, without seriously interfering with the specific design for which the exercise of recitation was primarily instituted, is proved by experience to be impracticable. Class recitations have, at best, the great disadvantage, that either but few out of a large number can perform at all, or that each one who performs shall be under examination for so brief a space of time as nearly to defeat every useful object, and to render the exercise little better than an idle form.

Another serious vice of the system, is its pernicious influence on the teacher. To whatever degree it may be coercive to the student, it is not in the least so to him. It stimulates him to no self-improvement, and awakens in him no ambition for higher attainments, on the one hand; and it affords him no adequate field for the display of genius, or for the turning of accumulated knowledge to use, on the other. Instead of this, the opportunity which it offers him of sinking, without observation, into a mere cipher, is a real, a perpetual, and a most insidious temptation to sloth. The difficulty of employing, in the recitation room, the expository mode of instruction, without overreaching too far upon the exercise proper to the hour, is enough, in itself, to repress in the teacher the teaching spirit, and to cause him constantly to tend to the level of the mere *répétiteur*. How dangerously is this tendency increased, by the fact that its downward direction coincides precisely with that in which the native love of ease is perpetually dragging all mankind! For this great evil, there is but one antagonistic influence, which can be of any avail: it is that of a living, fervent, zeal in his work, existing in the instructor himself; a zeal, not in the work of conducting recitations, as the remark might seem to imply, but which would be ridiculous—a zeal, rather, in the higher and nobler work of training immortal minds to vigor, and capacitating them for usefulness. The college officer, therefore, of the present day, whose interest in his profession is bounded by the fact, certainly uninspiring, however important to himself, that it secures to him the means of living, is in imminent danger of lapsing into a mere automaton.

The advantages of oral teaching are thus set forth:—

According to the plan, if the teacher possesses any knowledge on the subject of study, which is not contained in the books of the course, or not easily accessible to the student, or if the sources from which such knowledge may be obtained are above the present level of the student's capacity, this knowledge will be brought out and made available. And if he possesses any power of clear analysis, or of luminous illustration; if he possesses, as he ought, in order to occupy fitly a position of this high responsibility, that mastery over his theme which belongs to the man who has ceased to think of the truth which he teaches as of a something found in books, and of which all that he knows is knowledge gathered at second-hand; but who has independently interrogated the sources of information himself, and stands in immediate contact with nature and with thought, feeling no need of an interpreter—if this is his own intellectual character, this the

degree of his intellectual cultivation, and this the comprehensive scope of his acquired resources—then his teachings will carry with them, to the minds of his hearers, a fullness of satisfaction, and fasten themselves there with a permanency of impression, such as no amount of perusal of mere lifeless text-books, written down to the level of their immediate attainments, no matter how earnestly attentive, or how conscientiously faithful the perusal may be, can ever produce.

Not that from such a system of instruction books are to be discarded. By no means. Not only will the necessity of books continue to be as absolutely imperative, as under any system whatever of recitation from a text; but the multiplication of books will be an inevitable consequence. For, while the instructor will aim to expound all that relates to theory or doctrine, he will not embarrass his classroom with the lumber of innumerable applications, which, however useful they may be, are the proper labor of the student himself, in his solitary study; neither, in regard to simple matters of plain fact, of which a multitude are strewn along the path of every walk in science, will he consider it expedient to occupy time in stating, in minute detail, what can be found in every book, and what needs but to be read once to be understood. For their necessary enlightenment in matters such as these, he will refer his pupils to certain selected authors, of which he will designate the portions which require their attention, with as much regularity as if they were to be subjected to examination upon the same passages. But he will not always confine himself to one author, nor always give the same author preference; for his business is to teach a subject, and not a book; and books, therefore, are not his guides, but his helps. Nor will the student find it quite a practicable thing to disregard the recommendations thus made, or to neglect the perusal, or rather severe study, of the books designated; for he will shortly discover that this study is indispensable to his understanding and properly profiting by the instructions of his own immediate teacher.

The two salient merits of the method of instruction here proposed, then, for the class of learners contemplated, are, first, that it both permits and compels the teacher to *be* a teacher, and neither constrains nor allows him to sink into inactivity, nor to content himself with presiding in empty state over an exercise to which he is conscious of contributing nothing valuable; and, secondly, that it makes *knowledge itself*, and not the substance of any *treatise* upon knowledge, not any *artificial form* into which knowledge has been thrown, the immediate subject of teaching.

To make the plan of oral teaching more effective, President Barnard proposes to introduce another feature, somewhat peculiar:—

This is to afford to the members of the class, pursuing their studies in any school, the opportunity, after the instructor shall have completed the exposition of the topic of the day, to bring up for re-examination points which still remain to them obscure, or to ask further information in regard to matters which may not have been fully explained. This is, in fact, to inaugurate a species of recitation in which the student and teacher reverse the positions usual in this exercise. The student questions; the teacher replies. The student should even be permitted, if he pleases, in cases which admit of argument, to take issue with his instructor, and to present his reasons for his opinions. Discussion will be advantageous to both parties, and will keep more actively alive the interest felt by the class in the subject of study.

But the larger portion of the "*Letter*" is devoted to an elaborate effort to induce the trustees, by inaugurating the project of a post-graduate department, to take a first decided step in the direction of a higher development of the educational system of the state.

The character of every school, from the highest to the lowest, within our borders, is to be determined ultimately by the respectability or the inferiority of this. Though it is true that but a fraction of the people will receive their personal instruction within the university halls, yet all, without exception, will be partakers of the benefits of which the university is to be the fountain-head and the central source. If the institution does not immediately teach the entire people, it will

teach their teachers; or, what is equivalent to this, it will force every instructor, whom it does not itself instruct, to come up to the standard it prescribes, on penalty of being else driven from the educational field. * * *

But what *is* the university of to-day? What, but a training school for immature minds—impaired, indeed, in its usefulness for this purpose, by the very attempt to accomplish, along with it, other and entirely incompatible objects? If the people suppose that this is a place to make practical men, or learned men, or profoundly scientific men—if they suppose that it is within the reach of possibility for the university, under the existing system, to turn out accomplished engineers, or expert chemists, or proficient astronomers, or profound philosophers, or even finished scholars—we know very well that they are deceived. Not that this institution falls any further short of accomplishing these ends, or fails any more signally to meet this popular impression, than other American colleges; but that the power to do these things seems, by force of a general hallucination, to be attributed to colleges as a class, while, in point of fact, it does not actually exist in any one of the whole number. * * *

The existence of the want of institutions of a higher than merely collegiate grade, as a reality, is made evident by the earnest and urgent demand, spoken of earlier in this communication, which has been, for the last thirty or forty years, so extensively heard, for something or other which the existing educational system does not supply. This demand, so far as it has proceeded from scholars and men of science, has taken the specific form of a demand for universities called by that name; because scholars and men of science have been able to perceive distinctly, that the university was the precise thing needed to satisfy the want. But when it has come from the people—and from the people it has come very steadily, for at least a quarter of a century—it has been, not for the university by name, but for new schools of some vaguely-conceived description; for colleges to be broken up and destroyed in all that regards the province of their past usefulness, and built up anew upon some visionary plan, and according to some impracticable theory; for schools of science, as applied to the arts of construction, of agriculture, of manufactures, and every thing useful to mankind, but chiefly things useful according to that literal sense which confounds utility with increase of wealth; for schools, in short, which should do what the collegiate schools do not do, and what we know that it is not necessary or even proper that they should do—prepare men, so far as schools can prepare them, to take directly hold of the real business of life. No one is ignorant that this demand has existed for a period at least as long as asserted; that, at times, it has been vociferous and violent; or that, not content with insisting on the creation of new schools, to accomplish the ends desired, it has turned, occasionally, almost in a spirit of vindictive destructiveness, upon the old, because they did not accomplish those same ends.

These demands, the undersigned ventures to assert, are evidence of the want of higher universities. Not because they ask for the university; not because their authors, if the university were proposed to them as a remedy, would be likely to accept it; but because the present inconvenience, which is so sensibly felt, is one which the university would remove, though those who feel it do not perceive how. And why not? Because first, looking at universities, as they have been in past centuries, as the repositories of literary lore, as the resorts of scholars dealing with abstractions, as the burrowing-places of book-worms, eating out the hearts of the black-letter volumes of the sixteenth century, or of the manuscripts of the sixth, as the unchallenged domain of grammarians and lexicographers, of commentators upon Aristotle and Longinus, ingenious speculators upon the mysteries of the digamma, and indefatigable elaborators of ethical and logical niceties, they picture them, in their imaginations, even to this hour, as solemn and shadowy retreats, still smelling of the dust and mold of antiquity, where philology, linguistic philosophy, and the sublimer metaphysics brood, like the pensive owl in Gray's churchyard turret, with none to

"Molest their ancient solitary reign."

But this conception is entirely erroneous. The university, in the sense in which the name is now generally received, no matter what may have been its original acceptation, is *Universitas Scientiarum;* it is, in other words, an institution in which the highest learning of its day is taught in every walk of human knowledge.

When classic learning, philosophy, and logic, were subjects of the highest interest in human estimation, it is not surprising that the character of university teaching should have been principally determined by them. But, inasmuch as, at the present day, physical science has attained a position of actual dignity, immeasurably higher than it then enjoyed, and as its useful applications have become almost endlessly more numerous and varied, the university of to-day would fail to be what its name imports, if it did not assign a corresponding prominence to these subjects—subjects, be it observed, which happen to be the same for which the agitators we have been speaking of demand that a special provision of special schools shall be made. * * *

There is, however, a second class of agitators, who, while admitting the justice of the foregoing representation, are not disposed to accept the university as a remedy for the inconvenience they suffer, because, while it gives them all that they demand, it gives them at the same time much more—much for which they do not ask, and for which they do not care. They fear so great a project, as the creation of an institution, professing, and really preparing itself, to teach every thing embraced in the entire circle of human knowledge. They fear that, in attempting this, they shall attempt what is beyond their means; and that, by grasping too much, they shall loose every thing. It is believed that all this class of persons, if they rightfully interpret our views, will find that we are entirely in accordance with them, and they with us. For no such visionary scheme is entertained by any one connected with this institution, as that of creating here, in a day, a university, complete in all the many-faced aspects of a repository of universal truth, and a dispenser of universal knowledge. What is aimed at, what is recommended, is only, as already stated, to take a first step in the right direction—a step which shall, indeed, ultimately conduct to the fulfillment of the great idea, but which shall not be itself the fulfillment—a step which will mark only the beginning of a progress, in which, advancing only as the growing intelligence and increasing wants of the people of the state shall urge it, the University of Mississippi may, to the eyes of a future generation, at length present the lustrous spectacle which the comprehensive idea of a true university implies.

There is still another class, whose views on the subject under consideration can not be overlooked—a class possibly the most numerous of all those who concern themselves about it; or, if not the most numerous, at any rate, by far the most impracticable. Those are here indicated who deny the utility of high learning altogether. They are, of course, utilitarians in the technical sense of that word. Let any thing tend to promote the bodily comfort of the race—let it furnish man with food, or keep him warm, or put a barrier between him and the weather—and that is a useful thing. By consequence, therefore, science does, occasionally, in some of its practical results, command their partial consideration; but, for science or learning as a whole, a matter between which and the increase of wealth no connection in the relation of cause and effect is to their minds obvious, they have no respect whatever. To elevate the intellectual man in the scale of being, to enable him to form larger and juster views than his unaided senses or his individual, casual, and unsystematic observation has qualified him to conceive, of the power and wisdom and goodness of the great Architect of the universe, to introduce him to a world of enjoyments growing out of the exercise of the godlike intellect upon subjects of beauty, and sublimity, and deep-seated and with delightfully difficult effort laboriously unraveled truth—enjoyments such as doubtless occupy cherubic intelligences, in their rapt contemplation of the wonderful works of God—all this the mere utilitarian philosopher, ever like the man with the muckrake in Bunyan, looking downward, fails to comprehend and to appreciate; and all arguments addressed to him, founded upon the consideration, to which he is insensible, that knowledge is valuable for its own sake, are wholly thrown away.

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Is, then, scientific knowledge useful? Few objectors will take the broad ground of denying all utility to science; or of denying utility to all sciences. Few will hesitate to admit that every science furnishes some facts that are useful. Even the patient and diligent collector of bugs, and butterflies, and caterpillars, though looked down upon in a general way by the utilitarian with an amusingly sublime loftiness of contemptuous regard, if he but intimate a belief that he is upon the sure trace of a method of exterminating the insect scourges of the cotton-field, is

listened to with respectful, nay, with greedy ears, and is elevated at once to a position of comparative dignity. No scoffer at science, therefore, ever scoffs at the science, or at the facts of science, which he understands; understands, that is to say, not as simple, isolated facts, a thing which is generally easy—but understands in all their bearings, and relations, and far-reaching affiliations with other facts with which they have no obvious or visible connection—a thing which is often not easy at all. * * *

When Priestly, in 1774, turning the focus of his burning lens upon the substance known in the shops of the apothecaries under the name of red precipitate, detached bubbles of a gas identical with that which, in the atmosphere, supports life, who could presume that, in thus freeing one of the metals from its companion element, he had detected the composition of many of the most useful ores, and furnished a hint which was yet to reduce all metallurgic art, from the smelting of iron to the reduction of aluminium, under the dominion of chemical science, and to the severe rule of an intelligent and a productive economy? When, in the same year, Scheele, by operating on the acid of sea-salt, made first visible to human eyes that colored gas whose suffocating odor is now so well known to all the world, who could foresee the astonishing revolution which a discovery, then interesting only for its curious beauty, was destined to introduce into the manufacture of paper, of linen textures, and of a vast multitude of other objects, of daily and hourly use? Or what imagination could have been extravagant enough, or fantastic enough, in the exercise of its inventive power, to anticipate that a substance, for the moment not merely useless but seemingly noxious, would, in the nineteenth century, accomplish what, without it, no instrumentality known to science or art could have accomplished—find aliment for the rapacious maw of a letter-press, whose insatiable demands, already grown vast beyond all conception, grow yet with each succeeding year? When the chemists of the last century observed the discoloration and degradation which certain metallic salts undergo in the sunlight, who could possibly read, in a circumstance so apparently trivial, though occasionally troublesome, the intimation that the sun himself was about to place in the hands of Niepce, and Daguerre, and Talbot, a pencil, whose magical powers of delineation should cause the highest achievements of human pictorial art to seem poor and rude in the comparison? When Malus, in 1810, watching the glare of the sun's rays, reflected from the windows of the Luxembourg to his own, noticed for the first time the curious phenomena attendant on that peculiar condition of light which has since been known by the name of polarization, what prescience could have connected a fact so totally without any perceptible utility, with the manufacture of sugar in France; or have anticipated that an instrument, founded in principle on this very property, would, forty years later, effect an annual saving to the French people to the extent of hundreds of thousands of francs? When Œrsted, in 1819, observed the disturbance of the magnetic needle by the influence of a neighboring galvanic current, how wild and visionary would not that man have been pronounced to be, who should have professed to read, in an indication so slight, the grand truth that science had, that day, stretched out the scepter of her authority over a winged messenger, whose fleetness should make a laggard even of Oberon's familiar sprite, and render the velocity which could "put a girdle round the earth in forty minutes" tardy and unsatisfying?

Questions of this kind, suggested by the history of scientific progress, might be multiplied to fill a volume. Indeed, it has almost come to be a dogma in science, that there is no new truth whatever, no matter how wide a space may seem, in the hour of its discovery, to divide it from any connection with the material interests of man, which carries not within it the latent seeds of a utility, which further discovery, in the same field, will reveal and cause to germinate.

We would gladly follow President Barnard through his glowing argument, in behalf of higher learning but we must refer our readers to the "*Letter*" itself.

ENGD BY JOHN SARTAIN.—PHILA.

Walter B. Johnson

IX. WALTER R. JOHNSON.

WALTER ROGERS JOHNSON was born in Leominster, Mass., in 1794. His father, Luke Johnson, was a farmer of strong mind and decided character, and though but a youth at the breaking out of the Revolution, bore an active part in the struggle. His mother was only daughter of Rev. John Rodgers, first minister of Leominster, whose descent is traced in a direct line from Rev. John Rogers, the martyr of Smithfield.

Of these parents Walter was the only son, and the youngest of their three children. His mother died soon after his birth. He derived from his parents a robust physical constitution, intellectual vigor, and excellent moral endowments; and enjoyed through life, by hereditary right, the inestimable blessing of good health.

He early manifested a fondness for learning and a taste for books; and soon aspired to acquirements beyond the routine of the New England schools of the day. Of these, his assiduity soon enabled him to master the studies, and his local reputation for scholarship and manliness of character, procured him, while yet quite young, an invitation to teach a neighboring district school. While he fulfilled with punctuality the duties of his station, he lost no opportunity of making progress in his own studies, being stimulated by the prospect of securing by his own exertions the means of preparing for and pursuing the collegiate course which his father could not afford him. In 1814 he entered Groton Academy, completed his fitting for college within a year, and in 1815 entered Harvard University, as a freshman.

Here he maintained an unblemished character and a high position in his class. Continuing his earnest pursuit after knowledge, he applied himself to several studies not in the college course, including botany, chemistry, and some foreign languages. Under the necessity of supporting himself, and determined not to incur any avoidable pecuniary obligations, he spent his vacations in teaching in district schools. He graduated in Harvard in 1819, and, could he have followed his own inclination, would have remained in Cambridge to study law. He was however obliged to resolve to teach during two or three years, and accepted an

offer to become preceptor, as it was then called, of Framingham Academy.

Here he remained a year, laboring energetically in his vocation, and devoting his leisure hours to the sedulous study of law and belles lettres, at the end of which period he accepted a proposal to take charge of a small classical school in Salem, intended to prepare gentlemen's sons for college or business.

Mr. Johnson deeply appreciated and enjoyed the excellent society and rare literary advantages of his position at Salem, and he made good use of the improved opportunities which he found there for advancement in his knowledge of law, as also in science and general literature. He always considered intercourse with great minds a most powerful stimulus to his intellectual progress, and took great pleasure in his acquaintance with several eminent scientific men of Salem, including the venerable Nathaniel Bowditch. Under such influences, his predilections for the study of natural science received a new impulse, and he made large advances into its vast domains, subsequently the chief field of his labors and source of his reputation.

He was a ready writer, and a frequent contributor to the journals of the day, whose columns were always open to him. He occasionally wrote a sonnet or song, but most of his articles were of a grave and solid character. He excelled also in epistolary composition, and his letters were much valued by their recipients. His taste in literature was correct, and cultivated by study; and having a clear, sonorous, and flexible voice, and an excellent elocution, he loved oratory, and was successful in it. He was often desired to speak in public, and the anniversary of the Fourth of July especially, seldom failed to call forth from him either an oration or a poem.

Mr. Johnson had before this time become deeply interested in the cause of education, at large. It afforded, as he believed, the only sure foundation of a safe and prosperous republic; the only guarantee against poverty, crime, and anarchy. As this interest increased, he relaxed his attention to law, and bestowed more time upon an extended course of reading bearing upon the subject of education; undertaking to gather from the best works relating to it, from the time of Bacon to his own, whatever might with advantage be applied to the studies of American youth. The benefits derived from these investigations appeared in all the educational efforts of his after years, as teacher, essayist, lecturer, experimenter, and in preparation of text-books.

He remained in Salem but little more than a year, having been requested by the trustees of Germantown Academy, Penn., to become principal of that Institution, one of the most prominent in the state, originally endowed by it, and further enriched by private liberality. His acceptance of this offer was in part determined by a desire of more extended knowledge of the world; for hitherto he had never been outside of his native state.

The site of Germantown Academy was near the main street of Germantown, upon a lane leading away from it. The locality was salubrious and agreeable, and the buildings were surrounded by play-grounds and gardens, were substantial and respectable in appearance, sufficiently capacious, and included a library, philosophical and chemical apparatus, and comfortable dwellings for the principal and boarding scholars. Evidently nothing more was needed to make the institution equal to any in the middle or northern states in excellence or celebrity, except the appreciation of a liberal and vigorous system of instruction and discipline. A short time, however, sufficed to show Mr. Johnson, just come from the comparatively strict and thorough training of New England schools, that the public mind in Pennsylvania was far behind the age in the conception of what constituted a good education, and in appreciation of its value; and that, at least in the interior, far greater importance was attached to the development of soil and of animals, than of the minds of the young

Mr. Johnson was not long in perceiving that his principal field of labor here would be outside the walls of the Academy; and that to accomplish anything creditable to himself, or largely beneficial to his pupils or the cause of education at large, it would be indispensable to arouse the attention, convince the reason, and secure the co-operation of the trustees of the institution, and also of parents and guardians. A prevailing laxity of parental discipline and apathy on the subject of education, were among the discouraging obstacles to be surmounted, requiring long and patient effort, and for striving with which he had little taste or inclination. But he also discovered that he could count upon the sympathy and intelligent co-operation of many liberal and cultivated persons, both in attempts to introduce special improvements and in an endeavor to establish a common school system which should be commensurate with the wealth and influence of Pennsylvania.

In view of the wide field of effort which thus opened before

him, and of the manifest increase of the influence of his own wishes respecting the management of the seminary, he yielded, after some hesitation, to the wishes of the trustees, and continued at the head of the Academy after the expiration of the year for which he at first engaged. Under his management, the reputation and prosperity of the institution increased, and its classes were well filled. His own position became at the same time more pleasant, as he became better and more extensively known. His genial disposition found much to enjoy in the refined society to which he had access in Germantown and Philadelphia; he was invited to the well known "Wistar parties;" and his fondness for literature and science found much gratification from intercourse with the many men of eminence in those departments whom he thus met. He also greatly enjoyed the privileges offered by the Academy of Natural Sciences, and the Philosophical Society.

Giving up, at least for the present, and not without reluctance, his plan of returning to his native state and studying law at Cambridge, Mr. Johnson now turned his attention to the enterprise of educational reform in Pennsylvania, in co-operation with the company of benevolent and energetic men who at that period set themselves to awaken the state from her indifference to the mental and moral condition and prospects of her youth. Devoting to this purpose whatever time could be spared from the duties of the Academy, he traveled through the state in various directions, acquainting himself with the character, condition, and wants of the inhabitants, and gathering information and statistics; and visited Harrisburg to become personally familiar with the legislators and rulers of the state. The results of these investigations he used at home, in elaborating those writings in the theory and practice of education and instruction, which he published monthly in the newspapers of that day, which attracted much notice and were widely read and widely influential. Their publication was commenced in "The Commonwealth," at Harrisburg, in 1822; with a series of thirteen essays on education, which embodied his general opinions on common schools, and on the establishment of a system in Pennsylvania. Another series of six essays on the same subject appeared in the Journal of the Franklin Institute, in 1823.

Among the pamphlets issued by him in 1825, embracing the views which he had published originally in the columns of a newspaper, was that entitled "*Observations on the Improvement of Seminaries of Learning in the United States, &c.,*" in which he advo-

cated the immediate establishment of "*Schools for Teachers;*" in this particular coinciding with the views put forth at the same time by Rev. Thomas H. Gallaudet in Connecticut, James G. Carter in Massachusetts, and President Lindsley in Tennessee.

These inquiries and efforts Mr. Johnson continued for a number of years, and had the satisfaction of believing that he had been an influential assistant in procuring the passage of the law of 1834, which gave Pennsylvania a general system of public schools, and virtually proved the winning of the long contest with ignorance and prejudice. During the long series of years while this law may be said to have been maturing, not less than two hundred and twenty public acts on education had been passed by the legislature, but none of them, until this, was upon a basis broad and liberal enough to be satisfactory to the friends of education, or practical in its results. Much time and money had been spent in procuring this course of legislation, various isolated colleges, academies, &c., had been benefited, and a number of acts had been passed to establish public schools exclusively for the poor; a species of benefaction which that class, to its credit, was too independent to accept.

In the autumn of 1823, feeling that his position and prospects justified the step, Mr. Johnson united himself in marriage with the eldest daughter of Dr. Loth. Donaldson, of Medfield, Mass., with whom he lived until his death, in unbroken happiness and affection. Upon bringing home his wife, he resumed his academical duties with undiminished ardor, and was now enabled to offer much greater advantages than before to such pupils as were placed in his family and under his entire supervision.

Although faithful and successful in the labors of the position he had assumed, its numerous and often vexatious duties, and the unvarying routine of school duties, were not in harmony with Mr. Johnson's tastes, nor with his mental activity and love of positive progress in knowledge; and accordingly, when after a time an opportunity was presented him to enter upon a course of labor requiring his favorite investigations and discussions in natural science, he gladly embraced it. This opportunity was offered by the Franklin Institute, then a young but vigorous and efficient organization, and about establishing a High School, with an especial design of affording the industrial classes cheap instruction in sciences and arts. The committee appointed to carry this design into execution, requested Mr. Johnson to lay out a system of instruction for the institution, which he did; and being further

invited to carry his own plans into operation under the auspices of the Institute, he resigned his place at Germantown and removed with his family to Philadelphia in 1826. The High School was soon organized, and went into operation with a large class of pupils, with a comprehensive course of instruction, designed to prepare either for a collegiate course, professional studies, or business life.

The monitorial system was introduced into the school, as economical and also as pre-eminently available, under the circumstances, both for teachers and pupils. The third annual report, in describing the number of pupils and their studies, says, "The High School is in complete operation with its full complement of three hundred and four. Of these three hundred study the English language, one hundred and fifty-three the French, one hundred and five the Latin, fifty-five Greek, forty-five Spanish, twenty German, two hundred and forty geography, three hundred elocution, two hundred and thirty-one linear drawing, and all arithmetic or some branch of mathematics." The system of Dr. Marsais was adopted in the study of foreign languages; and manuals were prepared for Greek by Mr. Johnson, for Latin by Mr. Walker, and for French by Mr. Bolman, which were used with success. Having given much attention to Greek, Mr. Johnson believed it an error to teach it as a dead language, but that modern Greek was substantially the same as the Greek of the days of Homer, and a living language, and as such he taught it. In these views he was sustained by means of some of the most distinguished Greek scholars of our own country, and by some of the most intelligent native Greeks who have written on the subject. Mr. Johnson found that his system gave his pupils a taste and fondness for a language generally esteemed a most difficult and discouraging one; and in the short period during which they were under his instruction, many of them became able to read with ease, intelligence and propriety, the poetry of Sophocles and of Homer.

The school fully answered the design of its founders, affording at the low price of twenty-eight dollars a year, instruction in all studies which it could ordinarily be desired to follow, and enabling those of narrow means to acquire an education of a grade before attainable only by the wealthy. Encouraged by this success, the Institute proceeded to enlarge their means of diffusing knowledge by establishing professorships in several branches of science and art, the incumbents of which were to prepare and deliver an

annual course of lectures before the members of the Institute and their families. Mr. Johnson was appointed to the chair of mechanics and natural philosophy—a department for which he was peculiarly fitted, and which had always been a favorite with him. It was therefore with the zeal both of duty and pleasure that he entered upon investigations in which he took the utmost delight, but which he had never before been able to pursue far without infringing upon the time and strength due to his regular employments. With the purpose both of increasing the interest and usefulness of his lectures, and of providing for himself the means of experiment, he provided an extensive mechanical and philosophical apparatus. The classes included both sexes, and many adults, and were numerous and uniformly interested and attentive during the many succeeding seasons when his lectures were given.

Although actively engaged in the educational department of the Franklin Institute, Mr. Johnson was always ready to co-operate in promoting its general objects through other channels. He contributed to their Journal, took part in their deliberative and conversational meetings, engaged in its discussions of questions of practical science, and prosecuted with reference to it, either alone or with others, in elaborate researches on subjects of great importance to the arts and to mankind. Nor were his labors limited to the objects of the Institute. The Academy of Natural Sciences of Philadelphia had elected him a member soon after his removal to the city, and he took a place among its working men of science, and was in the habit of contributing to its collection, especially such minerals and fossils as he could gather during his journeys or geological explorations in the state. He was a constant attendant at their weekly meetings, and frequently presided at them, and was for some time corresponding secretary. Papers by him are also numerously scattered through their published proceedings, for the many years of his residence in Philadelphia. It is scarcely necessary to add that his personal and social relations to his contemporaries of the Institute and the Academy were invariably most pleasant.

Mr. Johnson's official connection with the Franklin Institute continued for more than ten years. At the end of that time the High School, rendered superfluous by the adoption of a general school system, was given up, though the lectures were continued. During the whole period, besides discharging his official duties, Mr. Johnson was actively engaged in researches in physical science, often with a direct bearing on the arts and practical busi-

ness; and, it is believed, with no small result in contributions to the advancement of human knowledge. Many of his most important scientific papers, and several on education, were during the same period published in the scientific journals of the day.

Mr. Johnson was not content with merely mastering all already known of any department to which his attention was turned, but was accustomed to devote uncommon powers of patient investigation, careful analysis, and logical deduction, to the endeavor to discover new facts or to establish new principles. He possessed great quickness in comprehending even the most complicated mechanical devices, and suffered no new machine which came under his observation to escape the thorough understanding of its operations and uses. This aptitude was of singular advantage to him in the many elaborate investigations in physics which he afterwards pursued, in devising new apparatus or combinations of machinery.

Among the earliest and most important of these investigations was a series of experiments to determine the strength of materials, and the best construction of steam boilers. These were set on foot by the Franklin Institute, about the year 1830, and originated in a benevolent desire to prevent the misery arising from the frequency of steamboat explosions. The Institute appointed a committee of seventeen to carry out a systematic examination of the whole subject, whose operations resulted in a wide course of investigation, occupying many of the best scientific minds of the country for several years. A sub-committee of three, Mr. Johnson, Mr. Reeves, and Prof. Bache, was entrusted with that branch of the inquiry relating to the strength of materials. They sent circulars throughout the United States and abroad, requesting facts on the subject, and materials used in the manufacture of steam-boilers, to be submitted to scientific tests. The answers received showed a deep and general interest in the subject; and in a few months the committee were in possession of abundant facts for the further prosecution of their inquiries. The Secretary of the Navy, appreciating the importance of these researches, recommended their extension, and furnished the funds necessary for incidental expenses.

This branch of the inquiry was regarded as of paramount importance, and the committee applied themselves to it with corresponding zeal, devoting to it all the time which they could save from their ordinary occupations, for three or four years. Their report appeared in 1837, in 280 octavo pages, and included a

minute detail of all their experiments, verified and illustrated by tables and plates.

While conducting these experiments, and others on steam, heat, electricity, magnetism, &c., Mr. Johnson observed many phenomena suggestive of new physical laws; which, after verification, if of practical utility, he was accustomed to publish in some intelligible form. Of these discoveries, one of the most important was, that iron increases in strength, after being subjected to a powerful tension at an increased temperature, in the proportion of from 18 to 20 *per cent.*, with a gain in length of from 6 to 8 *per cent.*; a law verified by numerous experiments.

The importance of this discovery was regarded as great, especially with reference to marine equipments, where, as in cables, &c., the utmost possible strength is required with the least weight. Having devised a mode for the practical application of his discovery, Mr. Johnson submitted his scheme to Judge Upshur, then Secretary of the Navy, always of liberal sentiments in relation to scientific improvements, and who appreciated the value of this, so far as to direct a proving machine then about being furnished for the navy yard at Washington, to be constructed under Mr. Johnson's directions, in such a manner as to admit the application of his improvement to chain cables and to examine its feasibility. The result justified all that had been claimed for thermo-tension, but it was found that some modifications in the usual form of the links of chain cables would be necessary in order to admit its successful application to them. In a letter written about this time Mr. Johnson says, "The experiments on chains and bars of iron, hot and cold, are continued daily. I am making efforts to introduce some improvements in the mode of fashioning the links of chains and their studs. The prejudice in regard to old habits has to be met by persevering efforts to prove incontestably the superiority of the forms which I have proposed to substitute. Every step which I take batters down some obstinate prejudice and opens an easier and easier path to the success of my proposals. In the form of the studs and cross-stays of links, I have already effected a change, and as I have four or five times in succession proved that the new form of link is itself stronger and more enduring than the old one, I have little doubt that it will also gain the ascendency."

These experiments were never completed. They were at first discontinued in obedience to an order from the department to suspend all operations under the head of general increase, and subse-

quent imperative duties elsewhere, and changes of administration, prevented them from being resumed.

In the summer of 1836, Mr. Johnson quitted for a time the arduous occupations of the laboratory, the lecture room, and the study, for a more genial and healthful sphere of inquiry among the minerals and fossils of the coal formations of the Alleghany mountains, and of the region of the west branch of the Susquehanna.

In geology, comparatively a new science, and in its related pursuits, Mr. Johnson's attainments had hitherto been bounded by what was already known. He now, however, proposed to himself the pleasant task of independent investigation, with the hope of himself adding something to the extent of human knowledge. Having already made many investigations on the special department of the properties of iron and coal, he felt peculiar interest in studying their features in their native forms and localities. On this and subsequent occasions, indeed, he visited most of the coal fields of any note, of our own country, of Nova Scotia, and of Wales and some other parts of Europe. He also examined extensively the iron districts, studying the different ores and their localities, and collecting samples for future analysis. Some of these explorations were professional, for the benefit of mining companies, or to determine the value of lands; but an ultimate motive in all of them was the attainment of knowledge and the advancement of science; and their results were not only published in official reports to the companies interested, but were also the basis of many scientific papers which were afterwards published from time to time as occasion served. During these same explorations, no opportunity was neglected of collecting minerals, fossils, and curious or interesting relics and materials of whatever kind, relating to the natural history of the regions traversed. On one occasion, while ascending the Sinnemahoning in a skiff, he observed, high up an overhanging sandstone cliff, some rude attempts at engraving. With much labor and difficulty he had them detached, and upon examination found them to constitute a rude map of the course of that river and the country near it, and the animals found in the valley. He had it cut down to a manageable size and sent to the Academy of Natural Sciences at Philadelphia. The Pennsylvania Historical Society afterwards published a *fac simile* and description of this curious specimen of aboriginal topography.

In 1837, Mr. Johnson was appointed to take charge of the

department of magnetism, electricity, and astronomy, in the United States Exploring Expedition, as originally organized; a post which his love of knowledge and his desire of investigating a new field, induced him to accept, notwithstanding the long prospective absence from his home and family. He entered upon preparatory duties sometime before the departure of the expedition, and occupied some months in verifying and testing the instruments to be under his care, in a temporary building erected for the purpose on Rittenhouse square, in Philadelphia, and with the aid of several naval officers, and of Profs. Walker and Kendall.

Relying on the faith of the government, Mr. Johnson resigned his professorship. in the Franklin Institute, for these preliminary labors, and was also obliged to make other sacrifices and preparations. But after many months of active preparation, and many more of vexatious delay, these justifiable expectations were disappointed by the abandonment of the original plan, and the reduction of the fleet, outfit, and scientific corps, to an extent and grade every way inferior. The dignity and efficiency of the scientific corps, in particular, was so much curtailed that it was with disappointed hopes and lowered expectations that those who were retained, embarked on the voyage; and it was with satisfaction rather than regret, that Mr. Johnson finally received notice from the Secretary of the Navy that his services would not be required; and the satisfaction of his family, whose scientific ardor was naturally less vivid than his own, was still greater at his announcement that he would again resume his favorite home avocations.

As the sphere of labor, and the demand for it, in the department of applied science was now constantly widening, from the wants of the increasing development of the mineral, agricultural, and industrial resources, and the general intelligence of the country, Mr. Johnson experienced no lack of employment. Besides extensive geological explorations in various parts of the country, analyses of minerals, and writing the requisite reports, he had occasion to enter, as by a natural gradation, into a new field, that of organic chemistry. The Pennsylvania College at Gettysburg, having in 1839 organized a medical department in Philadelphia, Mr. Johnson received and accepted the appointment in it of Professor of Chemistry and Natural Philosophy. In preparing for the duties of this chair, he was required to investigate the important and interesting relations between physiology, pathology, and

animal chemistry, and to prepare them for lucid explanation to his class. This required laborious study and profound thought; but the pursuit was one of fascinating interest to him, and his lectures were among the most popular of the whole course, eliciting the applause of the students and the approbation of the faculty. He retained this position for four years, at the end of which time he resigned it, to devote his undivided attention to scientific investigations requiring his presence elsewhere.

The practical knowledge which long experience had given him in relation to coal and iron, had led him to the opinion that they were the two most important productions of the country, both politically and economically; and that the extensive and rapidly increasing use of coal, especially in commerce, navigation, and manufacturing, demanded a thorough scientific investigation of the properties of all its varieties, for the ascertainment of their absolute and relative values, in generating steam, producing heat, and for other purposes. Under the conviction that such knowledge was attainable, and that it was a desideratum of especial value to the navy, Prof. Johnson addressed Secretary Upshur, with the view of obtaining the authority of Congress to institute the requisite experiments. The Secretary accordingly recommended the measure; in 1841 a bill was passed authorizing him to appropriate the necessary funds, and Prof. Johnson was authorized to commence the work. The preliminary steps were at once taken, and the navy department invited coal dealers to furnish specimens of varieties of coal for experiment.

The preparation of the necessary apparatus delayed the commencement of actual operations until the fall of 1842. The work was still for some reason suspended until 1843, when it was recommenced and industriously continued to a close in November. Forty-one samples were tested, and sixty tons of coal consumed in the experiments. A preliminary report was soon issued, giving a general account of the proceedings, for the satisfaction of the numerous inquirers on the subject. A final report however remained to be prepared, to embody in a systematised form the great mass of notes, observation, and analyses which had been accumulated, and to make it available for practical purposes. This was completed and issued by Congress in 1844, and constituted an octavo volume of 600 pages.

This report commanded universal approbation for profound and laborious research, accuracy, and extent of information. Prof. Johnson, however, considered it only the beginning of the much

greater work which he contemplated; namely, the continuance of his investigations until they should include all the varieties of coals from the principal coal fields of the United States, and from such others as in the progress of steam navigation we might have occasion to use, and thus to form a complete work worthy of our government, and commensurate with its deep interest in the development of our physical resources. But among the innumerable objects of personal and political interest, and the changes of our officers of government, many objects of great public importance are often overlooked, and left to be neglected, or promoted by the care of private enterprise. Among others, the researches among American coals, so creditably begun, yet remain to be finished, although its plan and execution as far as completed, commanded universal approbation, and although petitions often repeated and from various sources were presented, urging Congress to continue the experiments until their advocates desisted, hopelessly discouraged.

Meanwhile, the work, as far as it goes, has become a standard authority. The British Admiralty, in the similar course of experiments shortly afterwards instituted by them, adopted Prof. Johnson's plan as the basis of their operations; and those in charge of the corresponding series of experiments in fuel under the Prussian government, not only adopted his plan of proceeding, but bore an honorable testimony to their obligations to its author, in the preface to their published report, and also in a private communication to him.

About this period, Prof. Johnson was employed in various scientific researches connected with the Navy Department. He was member of a commission to investigate the subject of floating docks, and was engaged in examining various contrivances for preventing steamboat explosions, the causes and prevention of the corrosion of sheathing copper, and several subjects of minor importance, demanding much laborious research, and the drafting of various reports, published by government on their respective occasions.

In 1845, Prof. Johnson accepted from the city of Boston, an appointment, in connection with Mr. J. Jervis, the well known civil engineer, to examine and report on the sources from which a supply of pure water might be brought into that city; this important question having been surrounded with great difficulties during several years, from the numerous and conflicting opinions and interests combined to influence or prevent a decision; and it

having been determined to employ two gentlemen of acknowledged competency in scientific attainments, and free from local or personal interest or prepossession. The summer of 1845 was employed in this undertaking, and Prof. Johnson's share of the task was fulfilled with much satisfaction both to himself and to the public immediately interested.

From some years after this time, Prof. Johnson was employed in labors of a more literary character. He prepared for Philadelphia publishers, editions of some of the works of Moffat, Knapp, and Weisbach, adapting them to the wants of our own schools and students by emendations and notes of his own. During the same time, his pen, always actively employed, was engaged in various other writings, always having some relation to the advancement of science or to intellectual progress.

About this period, also, he entered with zeal into the study of agricultural chemistry, and was among the first to awaken the minds of the farming population of this country to the importance and profit of the judicious practical application of the principles of chemistry to the processes of their occupation. He prepared a course of lectures on the subject, which were delivered in Philadelphia and the neighboring cities to good audiences, attracting much attention from the novelty of the subject and the ability with which it was discussed.

Always taking a deep interest in chemistry, geology, and their kindred studies, he was one of the first twenty who organized the American Association of Geologists at Philadelphia in 1840. After the enlargement of the sphere of effort of this body, by embracing all the natural sciences, and their re-organization as the American Association for the Advancement of Science, in 1848, he served as their first Secretary.

Although for the greater part of his life devoted to pursuits of a scientific character, Prof. Johnson was interested in all organizations and enterprises for general improvement, whether political, philanthropical, or educational. While at college, he joined such societies as aimed at personal improvement or the laudable exercise of the social affections. He was a zealous and efficient mason, and rose through many grades of office in their organization. He was an early and active member of the Peace Society, and of the Temperance organization. Indeed, he never allowed himself to fall under the dominion of any animal appetites; and finding himself becoming gradually more addicted to the use of tobacco, which he had learned to use at college, he discontinued its

use entirely, and never resumed it. He maintained a strict temperance in all things, through life; believing it essential both to bodily health and mental vigor.

For mere party politics he had little taste, and never mingled in its contests, but thought and acted decidedly and vigorously on all subjects affecting the public welfare. His efforts in the course of the movement for educational reform in Pennsylvania have already been adverted to. His opinions relative to education made him a willing member of organizations for promoting it, and a participant in their counsels and efforts, so far as his occupations and location permitted. He was a member of the National Institute at Washington from its first organization, and while a resident there was an active member and constant attendant. With his fellow members, his social relations were most agreeable, to the end of his life; and his last meeting with his friends around his own board was with them. He was honorary member of the Maryland Institute for the Promotion of the Mechanic Arts, and delivered courses of lectures before them for several successive years; the first in 1849, and the last, which was also the last he ever delivered, in 1852. No similar effort, perhaps, ever called forth more universal approbation from its audience than did this. Its subject was "The Social and Industrial Relations of Man in Europe and America."

He was always attentive to the calls of humanity, and a friend and helper to the poor and the oppressed, whether from Europe, or his fellow-countrymen, with voice, pen, and purse. An ardent lover of liberty, both civil and religious, while he held firmly and boldly to his own opinions, which approximated most nearly to those of the Unitarian denomination, he recognized the like freedom in all others, while abhorring all bigotry, cant, and hypocrisy.

Finding his chief occupations centering in Washington, he removed thither with his family in 1848, still hoping that Congress would authorize the resumption and completion of his researches in American coals; continuing his own scientific researches, and transacting some business connected with mining, civil engineering, and the procuring of patents.

At the organization of the London Exhibition of the Industry of all nations in 1850, Prof. Johnson took a lively interest in the enterprise, and was among the first in this country to move in the promotion of it. He was appointed secretary of the central

committee for the United States, and performed the duties of the office zealously and faithfully.

He had for some time contemplated a visit to Europe; and as no occasion seemed likely to occur more attractive than that of the opening of the World's Exhibition in 1851, he embarked for England with part of his family, and spent some eight months in visiting England, Wales, Germany, Switzerland, Italy, and France, crowding every day and hour with a multitude of acquirements and observations treasured up for use in after years, had such been allowed him. He returned, gratified to the full extent of his expectations, both with the knowledge acquired and with the courtesy and kindness enjoyed in his brief intercourse with such men of science and learning as he met, and in the facilities given him for examining all objects of general or special interest.

In January, 1852, he was summoned to give evidence before the House of Representatives, upon the stability of the work in progress on the capitol extension; a task which made it necessary for him to examine elaborately the qualities of the materials used and the mode of their arrangement. This occupied him several weeks, and was performed to the satisfaction of all parties.

He had scarcely completed this work, and indeed was actually engaged in his laboratory in carrying out some further researches in relation to it, when he was suddenly attacked by the fatal malady which terminated his life in the brief period of six days, on the 26th of April, 1852.

Although he had never labored with the primary purpose of accumulating wealth, he had usually been liberally paid for his professional exertions; and his rule of moderate expenditure enabled him to live in respectable independence and generous hospitality, and to gather a comfortable provision against future contingencies.

The example of Prof. Johnson's life should encourage self-reliance. Almost from his infancy he had earned his own living. He left no debt uncanceled, and never sought for patronage from the rich or the powerful. In reliance upon divine protection and aid, he put his own hands vigorously to the work he desired to do, and steady prosperity was the result.

List of Publications by Walter R. Johnson.

I. *Educational.*

Essays (Thirteen) on Education, with Suggestions for Establishing a System of Common Schools in Pennsylvania. Published in the "*Commonwealth.*" Harrisburgh: 1822–23.

Essays (Six) on Education. First published in "*Journal of Franklin Institute.*" 1823.

Observations on the Improvement or Seminaries of Learning in the United States; with suggestions for its accomplishment, and Plan of a School for Teachers. Philadelphia: 1825.

Remarks on the Legal Provisions for Education in Pennsylvania. 1826.

An Address, Introductory to a Course of Lectures on Mechanics and Natural Philosophy; delivered before the Franklin Institute, of Philadelphia. 1828.

Introduction to the Greek Language, with a Key; to facilitate the literal and free translation of the text, to point out the grammatical construction of sentences, to show the inversion of style, to supply elipses, and to explain idiomatic expressions. 1829.

Remarks on the Duty of the several States in regard to Public Education. Philadelphia: 1830.

Lecture on the Importance of Linear Drawing, *and on the Methods of Teaching the Art in Common Schools and other Seminaries;* delivered before the American Institute of Instruction. August, 1830.

Remarks on the Nature and Importance of Enlarged Education, in view of the present state of society in Europe and America. January, 1831.

A Concise View of the General State of Education in the United States. 1831.

Lecture on the Utility of Visible Illustrations; delivered at the American Institute of Instruction. August, 1832.

Legislative Enactments of Pennsylvania on the Subject of Education, from the first settlement of the state, with remarks. 1833.

Remarks on the New York System of Education. 1833.

A Letter to Samuel Breck, on the Subject of Common Schools, Manual Labor Schools, and Seminaries for Teachers. First published in Hazzard's "*Register.*" 1833.

A Lecture on Schools of Arts; delivered before the American Institute of Instruction at its Annual Meeting. Boston, August, 25th, 1835.

Memorial (to the Congress of the United States,) Praying for the Establishment of a National Institution, for the prosecution of experiments and researches in those physical sciences which are required by the public service, and for the general welfare of the country. May 31, 1838.

Address, delivered at the Laying of the Corner Stone of the Academy of Natural Sciences, in Philadelphia. 1839.

A LECTURE, INTRODUCTORY TO A COURSE ON CHEMISTRY AND NATURAL PHILOSOPHY, in the Medical Department of Pennsylvania College; delivered November 3rd, 1840.

LECTURE ON THE MECHANICAL INDUSTRY AND THE INVENTIVE GENIUS OF AMERICA. Delivered before the Maryland Institute for promoting the Mechanic Arts. Baltimore, January 16, 1849.

II. *Scientific and Miscellaneous.*

Mr. Johnson published over fifty papers and reports on scientific subjects—all of them characterized by thorough, patient research and sound practical conclusions, and many of them prepared at the request of different departments of the government, and printed by order of Congress.

SCHOOLS FOR TEACHERS.

BY WALTER R. JOHNSON.

In 1825, Walter R. Johnson, Principal of the Academy at Germantown, Pennsylvania, published a pamphlet of 28 pages, entitled "*Observations on the Improvement of Seminaries of Learning in the United States: with Suggestions for its Accomplishment.*"* The principal suggestion for the improvement of educational institutions of every grade, was the establishment of *Schools for Teachers.*

This end (the improvement of seminaries of learning) is proposed to be accomplished by the introduction of a class of schools hitherto unknown in our country, but for which the public exigencies seem loudly to call, and these are *schools for teachers.* This plan is not offered as in itself a novelty; it has long been in successful operation in some countries on the continent of Europe, particularly in Germany (a region to which modern learning owes more than the learned are all willing to acknowledge), and there its beneficial influence is seen in every aspect of society. Some, we are aware, will be ready to object that we have hitherto been supplied, *without* such establishments, with as many teachers as could find employment, and with more than ever *deserved* it. True; and this is precisely the reason for founding institutions which shall afford a supply of *such as may deserve* the public confidence.

It is believed that the demand for good instructors is increasing in our country, in a ratio far exceeding that of the augmentation of our population. This belief is founded upon the consideration that many of the States, which have hitherto been destitute of school systems, are now forming plans for the general or universal diffusion of knowledge: that higher institutions, as well as common schools, are in all parts of the Union becoming the objects of favor and attention, to a degree heretofore unequalled: that in seminaries of every grade, the number of branches expected to be taught, is much greater than formerly: that in every quarter it is beginning to be understood, that under free political institutions, the cause of good learning is the foundation of success to all other good causes, and that as the public become enlightened on the subject, they are also becoming better qualified to distinguish the able from the imbecile, and those who act from principle from those who follow caprice or sordid interest alone. It is daily made more and more evident, even to those who reflect but little, that every man is not by nature an instructor; a truth which seems to have been overlooked by those who have been ready to employ the weak, untaught, and inexperienced for those offices in which eminent abilities, thorough instruction, and extensive experience are of the utmost importance. Besides, the qualifications of instructors must bear some proportion to the attainments required by their pupils in after life, by the circumstances in which they are to be placed. Adverting, then, to the qualifications *now* demanded of those who are to fill stations of public trust, or to occupy a distinguished rank in the affairs of private life, we may be fur-

* The following remark of Dr. Watts is quoted in the title-page as the *text* for the observations which follow:

"Instructors should have skill in the *art* or *method* of teaching. It is a great unhappiness indeed when persons, by a spirit of party or faction, or interest, or by *purchase*, are set up for tutors, who have neither due knowledge of science nor skill in the way of *communication*—for the poor pupils fare accordingly, and grow lean in their understandings."

ther convinced of the increasing demand for superior talents and high attainments, in those who are to form the character of our youthful citizens. Not only are our executive and legislative offices, in conformity with the public wishes, filled with the most eminent scholars of our country; not only do the bar, the bench, and the pulpit demand, as heretofore, the best talents of the community, but our army and navy also are beginning to make high intellectual attainments their principal passports to honor and promotion. Agriculture, manufactures, and commerce are calling to their aid men of science, intelligence, and liberality of mind; and the impulse given to physical improvements, implies the future demand for a large amount of energetic mental powers. To be ignorant of the rudiments of education, is at present regarded by persons of all ranks, and even of all complexions, as a serious misfortune; and in some parts of our country, as a heavy, positive reproach, to be covered neither by graces of person, respectability of parentage, nor splendor of fortune. Neither the sons nor the daughters of America feel that they have discharged their duty, either to themselves or to their country, until they have redeemed from a state of waste some good portion of that intellectual inheritance which has fallen to their share. Accordingly, we find that in districts of country where yesterday the first crash of the falling forest was heard, to-day the voice of science rises from the walls of her neat and classic habitation; and where within the memory of the present generation the shrieking matron was torn from her infant daughter by the ruthless savage, that daughter is *now*, amidst scenes of comfort and elegance, storing her mind with every solid and useful accomplishment, and *possibly* finds by her side the daughter of that very savage, an ardent but generous rival in the same ennobling employment.

These facts of themselves suggest, that a larger number than heretofore of persons able and willing to devote superior powers to the development of mind and communication of knowledge, must be employed in these responsible offices. Instead, then, of being regarded as surprising, that a project of this kind should be suggested at all, we ought, perhaps, under a view of all the circumstances, to think it remarkable that it has not been done sooner: that while every other profession has its appropriate schools for preparation, *that* on which the usefulness and respectability of all others essentially depend, is left to the will of chance, or "*to take care of itself.*" We have theological seminaries—law schools—medical colleges—military academies—institutes for mechanics—and colleges of pharmacy for apothecaries; but no shadow of an appropriate institution to qualify persons for discharging with ability and success, the duties of *instruction*, either in these professional seminaries, or in any other. Men have been apparently presumed to be qualified to *teach*, from the moment that they passed the period of ordinary pupilage;—a supposition which, with a few exceptions, must, of course, lead only to disappointment and mortification. It has often been asked why men will not devote themselves *permanently* to the profession of teaching. Among other reasons, much weight is, no doubt, to be attached to this want of preparation, and to the discouragements and perplexities encountered in blindly attempting to hit upon the right course of procedure. Many persons, we have reason to believe, commence the business of instructing, not only with few of the qualifications for communicating knowledge, but even without any fixed plan of proceeding, or any definite ideas of the peculiar duties and difficulties of the employment. With such persons, the operation is altogether *tentative*—a system of temporary expedients—or no system at all. They begin *somehow*—follow one course for a time, then drop it for another, which (finding it equally unsuitable) they abandon for some new project, that chance or caprice brings in their way, or, which is perhaps more common, after having found their good intentions unappreciated, and their labors unrewarded, they abandon in disgust both the plan and the profession together. And happy will it be, if in this unprofitable course of groping in the dark, they have done nothing worse than to fail in attaining the object of their pursuit;—happy if they have not wasted their health, impaired their mental energies, diminished their social propensities, and lost their relish for the refinements of literature and the researches

of science. To obviate in some degree these difficulties, to render his duties less irksome to the teacher, and more profitable to the pupil—to give to our institutions of learning (already the subjects of much applause) a still higher character, and thereby to subserve the interests of our country and of humanity, it is proposed to afford, by the institutions in question, an opportunity, to those who are designed for teachers, of making themselves theoretically and practically acquainted with the duties which they will be called upon to discharge, *before* they enter upon the performance of their trusts. In order, however, to afford illustrations of the principles of education, it is indispensable that *practice* should be added to precept, and that, too, in situations favorable to the operation of those causes which display both the powers of the mind, and the peculiarities of the several departments of science and art. The school for teachers, then, ought not to be an insulated establishment, but to be connected with some institution, where an extensive range in the sciences is taken, and where pupils of different classes are pursuing the various departments of education adapted to their respective ages. The practice of superintending, of arranging into classes, instructing and governing, ought to form *one* part of the duty of the young teacher. The attending of lectures on the science of mental development, and the various collateral topics, should constitute another. An extensive course of reading and study of authors who have written with ability and practical good sense on the subject, would be necessary, in order to expand the mind, and free it from those prejudices which, on this subject, are apt to adhere even to persons who fancy themselves farthest removed from their influence. The present is not an age when narrow prejudices of any kind can be expected to enjoy toleration and support; and, least of all, can such favor be expected for the prejudices of instructors, who, from the very relation in which they stand to their pupils, ought to be foremost in eradicating the absurd notions which a false estimate of things, and a wrong application of terms, have implanted in the mind. That this is not at present the characteristic of instructors, there is but too much reason to fear; and that the course here recommended would beget a more liberal spirit, there is every reason to hope. That class of prejudices, in particular, which arises from a disposition to form or adopt fanciful theories not reducible to practice, would be corrected by reading the kind of authors here recommended; and the same effect would be insured by adhering, in the choice of lecturers, to those, who, added to a truly philosophical character, have possessed an extensive *experience* in the duties of instruction. Should it be necessary, there might also be provision for the pursuit of other sciences in addition to that of teaching, by those who are preparing for that office. A perfect plan for the education of teachers and professors, would require that the institution, with which the school for teachers is proposed to be connected, should embrace a complete circle of the Sciences and Arts, and that a professor should be appointed to lecture on the mode of teaching in each separate department. But besides that few, if any, institutions of our country extend to so great a number of objects, there would be an insuperable obstacle to the execution of such a plan, in the *expense* which must necessarily be incurred—an expense which no authority short of the highest legislative body in the nation would, perhaps, feel itself adequate to meet—and *that* body has hitherto shown an aversion to extend its interpretation of "the general welfare" so far as to embrace the trifling subject of educating the sons and daughters of a republic.

In view of these difficulties, therefore, it would be advisable, at least for the present, to extend the plan no further than to comprehend—

I. A course of lectures and practical illustrations on the subject of *intellectual philosophy*, as connected with the science of education.

II. A course on *physical education* and *police*.

III. On the the mode of conveying instruction in the *exact* and *physical sciences*, and the various descriptive and mechanic arts.

IV. On the manner of teaching languages, belles-lettres, history, and, in general, all those branches commonly classed under the *philological department*.

Each course must of necessity embrace a large number of particulars. Each

has some affinity in its topics to all the rest, but not so near as to cause one lecturer essentially to encroach on the province of another.

The first course would embrace the subjects of resemblances and differences in the capacities of different individuals; the proper season for developing each faculty; the kind of study adapted to produce that development; the intermixture of different pursuits suitable to store and discipline the mind at different ages; the anomalies of talent which have been noticed or recorded, and their causes so far as known; the influence of moral causes upon the intellectual character of youth; and, in general, the effects of all the various departments of science, literature, and arts, and of the different modes of presenting them to the mind, towards perfecting the human understanding and character.

The second of the above-mentioned courses would include all that relates to the management of infancy, the personal habits, form, physiognomy, and health of children and youth, and their different capabilities of learning, so far as affected or *indicated* by these circumstances; the manners, exercises, amusements, indulgences of young persons, especially when employed in their education; the time and manner of attending to study, conveniences for private study and public recitation; arrangement of class-rooms for different purposes to be illustrated by drawings; the maintenance of order and expedients for enforcing it, together with the nature and application of stimulants, rewards, and punishments, and the temper, language, and general demeanor of instructors.

The third department of lectures would include the theory and practice of teaching in the several branches of common education, such as orthography, reading (mechanically), writing, arithmetic, and geography; the pure and mixed mathematics, physical astronomy, natural philosophy, chemistry, botany, mineralogy, anatomy, drawing, engraving, horticulture, and mechanic trades.

The last course would comprise directions to professors and teachers in a great diversity of branches, including not only the subjects usually taught at seminaries of learning, but also those which pertain to the several learned professions. Among these may be mentioned rhetorical reading, composition, logic, metaphysics, foreign and learned languages, history, chronology, law, theology, and medicine.

The auditors ought to receive advice and instruction from the lecturers in respect to their course of reading on the several topics presented in the lectures, and be arranged, and taught as their own pupils are to be afterwards, in classes according to their several capacities and attainments. As the auditors are supposed to be engaged, a part of their time, in the practice of instructing, it will become the duty of the lecturers to attend and observe their mode of conducting the exercises of their respective classes, and to comment upon it at subsequent lectures; affording to all an opportunity for free discussion and candid interchange of opinions on every topic arising out of the practice of a teacher. The course here marked out, might, probably, with the time taken up in practical teaching, occupy at least one year, and at the expiration of that time, a certificate might be given to each individual, stating the length of time he had employed, the qualifications he had exhibited, and the success he had attained in the several branches of instruction. It is, however, presumed, that in this case, the candidates for approbation had come to the institution well grounded in all those branches of learning of which they proposed to become teachers; otherwise a longer time might be required. In the former case, the *instructions* given them by lecturers on education would have for their object, to render them more familiar with the several subjects by frequent and careful *revisions*. In addition to this, some well-digested treatise on the subject of education might be selected and studied,—recitations being conducted after the manner of those in history or ethics. The lecturers might further be serviceable to the cause of education, by establishing and conducting, on liberal and philosophical principles, a *journal* to be devoted to that subject, and to embrace such kinds and varieties of objects as might render it instructing and entertaining to youth, to parents, and to instructors.

Illustrious Daughter

X. FRANCIS DWIGHT.

"I am to speak of a life, passed over without noise; of modesty at home and abroad; of continence; charity; contempt of the world, and thirst after heavenly things; of unwearied labors; and all actions so performed as might be exemplary or beneficial to others."—*Martyrology*," vol. I., p. 1684.

THE legitimate aim of biography is the exaltation of human character, not seeking to eulogize with fulsome panegyric its subject, but depicting, with the pencil of truth, the glowing virtues of the wise and good, not so much to praise and canonize the departed, however excellent, as to exert through their bright example a beneficial influence upon the present and future generations.

There are men whose lives are an epitome of self-sacrifice and usefulness, who pass through the brief struggle of mortal existence so calmly and unobtrusively that, like the graceful rivulet in the meadow field, imparting freshness and fragrance to all around, they move on through life without commotion, exciting no envious rivalry, escaping from angry collisions, and passing quietly away; having fulfilled a high and noble destiny.

It is a delightful duty to hold up such an example to those who are seeking true wisdom, and to illustrate, by a truthful exhibition of character, the qualities, attainments, and habits, which inevitably lead to honorable and useful distinction, and most tend to benefit the human race.

The name of FRANCIS DWIGHT stands high in the catalogue of those estimable and self-devoting characters who seek to do good to their fellow-men in their sphere of action. Connected with one of the oldest and best families in our country, descended from ancestors celebrated for their exalted religious and literary attainments, and their strict application of them to practical objects and ends, he early imbibed a proper sense of obligation to exert all his powers, to live up to the standard which his progenitors had reared for his imitation. Well he redeemed this cherished purpose of his soul—his short but earnest labors, during a brief career, left his fair family name not only untarnished, but imparted to it additional lustre, by his self-sacrificing devotion to advance the empire of the mind.

FRANCIS DWIGHT was born in Springfield, Mass., on the fourteenth

of March, 1808. At a very early period he gave promise of future proficiency. Possessed of an ardent temperament and strong will, he evinced an unconquerable determination to excel in the acquisition of knowledge. At the age of fourteen, (1822,) he entered Philip's Academy, at Exeter. When sixteen, (1824,) he entered Harvard University, at Cambridge, graduating therefrom in August, 1827, when he entered the law school of Northampton, in September, 1827, where he pursued the study of the law for two years.

On the first of September, 1829, he became a member of the law school, in Harvard University, and in July, 1830, he received most gratifying testimonials from Hon. Joseph Story, of the United States Supreme Court, and the Hon. John H. Ashman, both professors of the law institution at Cambridge. The name of Judge Story, the Dane professor of law at Harvard, associated as it is with the most distinguished judicial and private honor, will live, so long as talents and virtue command respect. An endorsement from that source was truly an inestimable passport, and it was with pride that Mr. Dwight could claim the friendship and regard of that eminent jurist.

When about to separate, Judge Story placed in the hands of Mr. Dwight the expression of his opinion that, during his studentship, he had been "very diligent and attentive to his studies, and irreproachable in his conduct and character," and "I take pleasure," he says, "in adding, that his talents and professional attainments entitle him to the confidence and respect of the profession and the public."

The severe application of Mr. Dwight compelled a short cessation from his professional studies, and he, soon after leaving Cambridge, visited Europe for a year or two, where he followed his literary tastes, and reveled in the enjoyment of association with many of the distinguished men who then filled the public eye; visiting all parts of Europe; examining the public institutions of France, England, and Germany, especially those pertaining to education; and employing his mind, while in the pursuit of health, upon those subjects which he thought might be appropriated usefully thereafter, to benefit the institutions of his own country. He seems to have kept his faculties constantly exercised, and prepared to receive every impression which surrounding objects might afford. It is thought his benevolent mind was first directed, during his tour abroad, to the subject of improved facilities of education for his countrymen, when contemplating the wide-spread despotism and misery existing in foreign nations, the certain offspring of ignorance and vice.

In 1834, he was admitted to the practice of the law, as an attorney at the bar of the Supreme Judicial Court of Massachusetts.

In 1835, he removed to Michigan Territory, where he was admitted to practice as an attorney and counselor.

In 1838, he commenced his residence in the State of New York, and was admitted to practice as attorney and counselor by Chief Justice Nelson, and, in 1840, was admitted, by Chancellor Walworth, to practice in the Court of Chancery.

Mr. Dwight resided, at this time, at Geneva, Ontario County. At this delightful retreat, his natural temperament had full indulgence in the calm, but industrious pursuit of learning, and not a moment was lost in storing and adorning, by hard study and investigation, his cultivated mind.

Mr. Dwight was an early and enthusiastic admirer of the gigantic intellect, and consummate statesmanship, of De Witt Clinton, and cordially adopted the philosophical and benignant sentiments of that illustrious man, as expressed in his gubernatorial message to the legislature, in 1828.

"Permit me," says Gov. Clinton, "to solicit your attention to the two extremes of education, the highest and the lowest. And this I do, in order to promote the cultivation of those to whom fortune has denied the means of education. Let it be our ambition (and no ambition can be more laudable,) to dispense to the obscure, the poor, the humble, the friendless, and the depressed, the power of rising to usefulness, and acquiring distinction." Here he first originated and embarked in the novel and also important enterprise of establishing, under state patronage, a journal to be devoted exclusively to the cause of education. There were great discouragements in the undertaking, but Mr. Dwight was not of a mold to succumb to any obstacles; he adopted, in all of his resolutions, the inimitable remark of Buxton: "The great difference between the great and the little, the powerful and the feeble, is made by energy, an invincible determination,—a purpose once fixed, and then death or victory." Aware, however, of the responsibilities he proposed to assume, he wisely consulted with older heads, and with those whose countenance and influence could best sustain his efforts At that time, learned and prominent public men, and wealthy private individuals, were manifesting deep interest in the cause of education. Mr. Dwight judiciously sought the counsel and advice of many of them, and in all quarters, and from the highest and best sources he received encouragement and promise of support. The Hon. John C. Spencer, being then, as secretary of state ex-officio, superintendent of the common schools of the state, a duty which he performed with his accustomed energy and zeal, was written to by Mr. Dwight, respecting his project, and

Mr. Spencer's reply (dated Albany, Dec. 9th, 1839,) greatly encouraged and stimulated his exertions. He says:—

Your letter of the 7th is received. I have long felt the want of a common school journal, through which my own communications might be made to commissioners and trustees, and which otherwise might be made a channel of valuable information. I know nothing which promises so much immediate benefit to common schools, and the cause of education generally. I am very glad you have turned your thoughts to the subject, and I do not hesitate to say that I deem you better qualified than any other person I know to conduct such a journal. I am clearly of opinion that such a paper should be published at the seat of government. At that point there is a concentration of intelligence, and of interest, that can exist nowhere else. My wish, therefore, would be that you should come to this city, and establish a paper devoted to education, that should be worthy of our state, and of the character she has already acquired.

And again, on 3d February, 1840, Mr. Spencer writes:—

I approve, heartily, of the plan of the journal for common schools contained in your letter of the 30th ult., and I should be glad to have you issue a number as a *specimen*. I entertain little doubt that the legislature will authorize me to subscribe for 10,000 copies, at $2500; but of course I can not guaranty it, and I suppose, until that subscription is made, I can not say absolutely *go on*. But the exhibition of a specimen number would, of itself, have great influence. We want a *new name*, that shall be appropriate; what say you to

"*The District School Journal for the State of New York.*"

This means something different from the *Common School* Journal, and refers directly to our system. If you conclude to print, let me know, and I will give you a letter of encouragement to publish, and, I doubt not, Gen. Dix will do the same.

In the month of March, 1840, Mr. Dwight commenced the journal, adopting the name recommended by Mr. Spencer. Its appearance produced a wide-spread sensation, and it was received with marked satisfaction by all interested in the great cause of education throughout the state. Mr. Spencer (March 28th, 1840,) writes, to Mr. Dwight:

I have received the copies of the District School Journal which you sent me, and am much pleased with its matter and manner. It is well filled, and its typography is beautiful. I hear it spoken of by several already, in high terms—have read one of them with great satisfaction. The selections are good, the tone and spirit is right, and every thing is as it should be.

Thus fortified and supported by the head of the school department, Mr. Dwight persevered in his adventurous task, and most efficiently and sucessfully did he discharge his editorial duties. He soon adopted the advice of the secretary of state, and removed to Albany, which proved a better location for the diffusion of his journal.

Very soon after reaching Albany, he was strongly urged to enter the political arena, and take part in the great presidential struggle, but he resolutely declined all solicitations of that kind. Although high official distinctions were promised, he could not be prevailed upon to quit the path of duty he had marked out for his future conduct. The turbid waters of politics were uncongenial to his tastes and habits, and he decided sensibly and definitely, to reject all inducements of official preferment, and to devote his life and talents to the great cause of *popular education*.

Mr. Dwight's singleness of purpose, and unwearied assiduity, secured the cordial co-operation and approval of the public authorities at the capitol, and, during a period of five years, his District School Journal was the focus which attracted, and cemented together, all the elements in the state, favorable to the great cause in which he was engaged. Mr. Dwight's modest deportment and captivating manners won for him golden opinions and sincere regard; it was remarked by those in closest communion with him,—

> "His tongue is still in concert with his heart,—
> His simplest words an unknown grace impart,—
> His air, his looks, proclaim an honest bent,
> And, ere he speaks, we yield our full assent."

He soon became pre-eminent in official station. He was selected as county superintendent of common schools for the city and county of Albany, and in that character, for several years, visited and reformed the schools under his jurisdiction; and his reports to the superintendent of common schools, display an admirable familiarity with the subject. He was one of the members and secretary of the board of common schools of the city of Albany; and, on 1st June, 1844, was unanimously appointed, by the regents of the university, one of a board, or executive committee, for the care, government, and management of the "*Normal School*," his colleagues being the superintendent of common schools, (Col. Samuel Young,) Rev. Alonzo Potter, Hon. Gideon Hawley, and Rev. Wm. H. Campbell.

In the midst of his many labors, arduous and unremitting, but performed, with delight because his heart was in the work,—at the time when the seed he had scattered broadcast, was ripening into a harvest of generally acknowledged usefulness,—with a larger measure of social and domestic happiness than is meted out to but few men, and with a future full of promise to him in all his relations, public and private, his brief and bright career was extinguished by death on the 15th of December, 1845, at the age of thirty-seven.

We can not better close this imperfect sketch than by recording here some of the many public and private expressions of sorrow which this event elicited. They afford the best possible evidence of the high appreciation of his services to the cause of education, and of his private worth, entertained by those who were associated with him in public trust, or who knew him well in the inner circle of his home, and of private friendship.

The executive committee of the state normal school, on motion of Mr. Benton, secretary of state, passed resolutions of condolence, expressing their appreciation, in the highest degree, of the eminent serv-

ices of Mr. Dwight, their late associate secretary and treasurer, as an ardent and most devoted friend of popular education, and an active and efficient member of that board. Similar resolutions were passed by the normal school, by the Albany teachers, and by a large number of the county school associations.

The Hon. Henry Barnard, then Commissioner of Public Schools in the State of Rhode Island after noticing the circumstances of Mr. Dwight's death, in the "*Journal of the R. I. Institute of Instruction*," closes with the following condensed summary of his labors and character.

At the time of his death, Mr. Dwight was a member of the executive committee of the state normal school, at Albany, as well as secretary and treasurer of the board, member and secretary of the board of commissioners of the district schools of Albany, and editor of the District School Journal of the State of New York. Since 1838, he has labored with a zeal, devotion, and intelligence surpassed by no other, in behalf of the various features of improvement which have been incorporated into the noble system of elementary instruction, of which the Empire State is now so justly proud. One of the first, if not the first Union School in the state, was established mainly by his efforts in the village of Geneva. The District School Journal was started originally at his own risk, as an indispensable auxiliary in the work of improving common schools. The system of county supervision, and of a single executive officer for each town, instead of the irresponsible and complicated plan of numerous commissioners and inspectors for each town; the origination and organization of the state normal school; the local improvements in the district schools of the city of Albany; and the various conventions of the county superintendents, found in him an early and earnest friend, co-operator, and advocate. He had consecrated himself to the great work of making education,—education in its large and true sense,—the birthright and birth blessing of every child, whether rich or poor, within the bounds of New York; and, for this object, he was willing to labor, in season and out of season, and to spend and be spent. But in the midst of his labors and his usefulness, he has been cut down; and, to use the language of his associates in the superintendence of the normal school, "in this sudden and afflictive event we recognize the frailty of earthly anticipations, and that neither distinguished public services, nor the highest prospect of future usefulness, nor 'troops of friends,' nor high responsibilities and far-reaching benevolence, nor worth, nor talents, can avert the inevitable hour." We dare not intrude upon the sacredness of private sorrow further than to add, that it was in the courtesies of private life, in the faithful discharge of all the duties of a friend, brother, husband, and father, that the excellencies of Mr. Dwight's character were best seen; and it is in these relations that his death is most severely felt.

An appropriate notice of the event, from the pen of the Hon. Horace Mann, appeared in the "*Common School Journal*," published in Massachusetts, in which, with great force and beauty, he depicted the merits of his departed friend:—

Before entering upon the discussion of any of the topics appropriate to the present occasion, we have the melancholy duty to perform of announcing the death of our personal friend and co-laborer, Francis Dwight, Esq., of Albany, so long and so widely known as the able, the sincere, and the efficient advocate of common schools. With other eminent friends of popular education in the State of New York, Mr. Dwight had been actively instrumental in devising, and in causing to be placed upon the statute book, the present code of laws on the subject of public instruction in that state, which code, at the time of its adoption, and until it had been substantially copied by other legislatures, was the most perfectly organized and

efficient system in the world. In all these stations of honor and of trust, Mr. Dwight had conducted himself with great discretion, ability, and zeal. As an examiner of schools, he was competent, impartial, and thorough; having the readiest disposition to discover and to applaud the aquisition of knowledge, and the justice to unmask and expose pretension and ignorance. As a member of the executive committee of the state normal school at Albany, he assisted in establishing that school upon a most admirable foundation, whether we consider the course of instruction there pursued, or the inducements held out to invite talent and educational enterprise from all parts of the state to avail themselves of its advantages. As editor of the District School Journal, being aided by the patronage of the state, which, at the expense of the common school fund, sends one copy of the Journal to every school district within its ample borders, he has spread before the people an amount of documentary information on the organization, the defects, and means of improvement, of common schools, more copious than was ever distributed before, in any part of the world. Continually supplied with their able reports by the county superintendents, the Journal has made the atmosphere of New York nutritious with common school ideas, and electric with common school zeal.

In the prime of life, and in the full vigor and maturity of his powers, and capability of discharging his duties, Mr. Dwight has left that noble sphere of action, which, from the affinities of his own mind to virtue and to usefulness, he had chosen. Public sorrow and private friendship mingle their regrets at his loss. At this season, when the harvest is so plenteous but the laborers are so few, ill can such a workman be spared.

The press throughout the state united in the expression of regret at so "irreparable a loss." The following notice from the pen of S. S. Randall, Esq., appeared in the District School Journal, Jan., 1846:—

In place of the customary gratulations of this festive season, our columns are this month clothed in the habiliments of mourning, in consequence of the lamented death of him who has heretofore, and for so long a period, been their guiding and informing spirit! On the 15th of December, ult., that spirit took its flight from earth to heaven, leaving desolation, solitude, and deep affliction to his bereaved family, and a large circle of acquaintances and friends. The numerous and touching testimonials of the various public bodies with which he was connected at the time of his death, and which we take the melancholy satisfaction in transferring to our columns, show the estimation and regard in which he was held by them and by the community in which he resided; but the loss which that community and the interests of popular education have sustained, can not be adequately expressed in words. Although liberally educated and furnished with all the advantages which wealth and foreign travel could supply, Mr. Dwight had devoted every energy of his fine talents and richly cultivated mind to the advancement of the interests of common school education. Industrious, indefatigable, judicious, and discriminating, he had availed himself of every practicable source of information and knowledge, which might in any way be brought to bear upon this great field of labor and usefulness; and "the cause he knew not, he searched out." He was a most efficient auxiliary in the establishment and organization of the existing common school system; and has uniformly been one of its most ardent and enthusiastic supporters and defenders, "through evil and through good report." In the discharge of the various public duties which were, from time to time, cast upon him, he was accurate, thorough, and efficient; and many an educator of youth will trace to the well-filled pages of this Journal, while under his immediate supervision, the germs of excellence and the materials of future progress in an arduous and laborious profession. As a man and a citizen, he was universally beloved and respected; and, if a life of earnest and constant endeavor to be useful in his generation, constitutes any test of christian charity, and religious hope, those consolations of the word of God, which cheered his dying hours and illumined the "dark valley of the shadow of death," afford the most gratifying assurance, that for him "to die was gain."

His funeral was attended on the 18th ult. from his late residence; and, notwithstanding the inclemency of the day, all classes of our citizens united in paying the last tribute of respect and affection to their deceased friend. The adja-

cent churches were thrown open for the accommodation of the pupils of the public schools, and such others at could not obtain entrance into the house; and the procession of citizens, on foot and in sleighs, was one of the largest and most imposing ever known in our city. In short, on no occasion have we ever known a more deep and general feeling of sympathy and grief than that which pervaded all classes of our community on the receipt of the melancholy intelligence of the death of our distinguished friend.

We have been permitted to peruse a note of condolence, written to his relict, (Dec. 18th, 1845,) by a distinguished friend of the deceased, the Hon. D. D. Barnard, of Albany, from which we make a few extracts:—

I hope it may not be deemed altogether an intrusion upon a grief so unspeakable as yours must be, that I seek to offer you in this way, in a single word or two, the expression of my heart-felt sympathy. I believe I know, better than any one out of his own family circle, what a loss you have met with in the death of your husband. I had, years ago, an opportunity to become most intimately acquainted with him; and, as he was utterly guileless, *I did* know him thoroughly, and just as truly as I knew him I loved him. I loved him, and mourn him as a brother. How vividly are now revived within me the unforgotten, and never *to be* forgotten, impressions then made on me, by his brilliant parts, his manly bearing, his high-souled generosity, his gentle heart, as tender and loving as a woman's. May I not hope it may tend a little to soothe the violence of your grief to know that he was well appreciated and sincerely loved? He had troops of grateful friends here, and all over the state, and his death is felt, and will be felt, as a severe public loss. This is something for you to know; but I wish you to know also that, for one, from the bottom of my heart I loved him. Happy as he was, happy in his family, and above all in you, respected by the world, and doing a world of good, how hard it must have been for him to die; and yet, as I am told, he was so calm, so composed, so resigned! This was like him; and, besides, he was a Christian. Let us bless God for this, and take comfort; and may God's own gracious arm, and his abundant love, sustain, revive, and console you.

We conclude by another quotation from a letter addressed to the widow of Mr. Dwight, by the Hon. Henry Barnard, of Hartford, Conn., then of Providence, R. I.:—

No death in the whole circle of my friends could have occurred so utterly unexpected, so startling in its announcement, as that of your husband. This very week, I anticipated spending a few days with him, that we might take sweet counsel together, on subjects to which we were mutually devoted. Although every where respected, and numbering troops of friends, it was in the walks of private life, in the numberless, nameless acts of kindness and of love, which marked his in-door family daily history, that the purest and most attractive traits of his character were exhibited, and that his loss will be longest and most deeply felt.

As a laborer in the same field, I feel his loss most heavily. No one could be more sincerely wedded to any cause, more willing to spend and be spent in its service, than he was to the cause of a generous and complete education of the whole people. Such laborers are few; and God grant that the standard, which he bore aloft so steadily, may fall into hands as strong—it can not be protected by a heart more true.

D. P. Page.

Principal of the State Normal School.
Albany N. Y.

XI. DAVID PERKINS PAGE.

Among the self-educated teachers of our time, the men who, as was said of old of poets, "were born, not made" teachers, and in whom the instinct for knowledge, and for imparting it to others, was sufficiently strong to overpower all obstacles, and carry them to the highest eminence in their profession, there are none who have excelled the subject of this brief memoir.

David Perkins Page was born at Epping, New Hampshire, on the 4th of July, 1810. His father was a prosperous, though not affluent farmer, and his early life was passed as a farmer's boy, with that scant dole of instruction which, forty years ago, fell to the lot of farmer's sons in small country villages in New Hampshire, or, for that matter, any where in New England. From his earliest years, however, the love of books was the master passion of his soul, and in his childhood, he plead often and earnestly with his father for the privilege of attending an academy in a neighboring town, but the father was inexorable; he had determined that David should succeed him in the management of the farm, and he did not consider an academical education necessary for this. His refusal doubtless exerted a good influence on his son; for a mind so active as his, if denied the advantages of the school, must find vent in some exercise, and the admirable illustrations he drew from nature, so often, to embellish and enforce his instructions in after years, showed conclusively that, at this period of his life, the pages of the wondrous book of nature had been wide open before him, even though his father's fiat had deprived him of other sources of information.

But He who guides the steps of his creatures had provided a way for the gratification of the thirst for knowledge which was consuming the farmer's boy, and that by what seemed an untoward Providence. At the age of sixteen, he was brought to the borders of the grave by a severe illness; for a long time he lingered between life and death; and, while in this condition, his friends despairing of his recovery, and his father, whose heart yearned over him, watching his enfeebled frame, seemingly nigh to dissolution, the apparently dying boy turned his large, full eyes upon his father's face, and, in an almost inaudible whisper, begged that, if he recovered, he might be allowed to go to

Hampton Academy, and prepare to become a teacher. Was not this, indeed, an example of "the ruling passion strong in death?" The father could not refuse the request proffered at such a time; what father could? The boy did recover, and he did go to the academy, a plain farmer's boy; he dressed in plain farmer's clothes, and hence, some self-conceited puppies, whose more fashionable exterior could not hide the meanness of their souls, deemed him fit subject for their gibes and sneers; but his earnest nature, and his intense love of study were not to be thwarted by such rebuffs; he pursued the even tenor of his way, and, having spent some months at the academy, he taught a district school for the ensuing winter, and then returned again to the academy. Here his progress in study was rapid; but, the ensuing winter, we find him again teaching in his native town, and his further studies were prosecuted without assistance. The next winter he had determined to make teaching a profession, and accordingly, having taught a district school at Newbury, Mass., during the winter, at its close he opened a private school; a daring step for a young man but nineteen years of age, and who had enjoyed so few advantages of education, but the success which followed fully justified the self-reliance which led him to attempt it. At the beginning he had five pupils, but he persevered, and before the close of the term, the number he had contemplated was full. Here, as every where else, during his career as a teacher, was manifested that diligence, industry, and careful preparation for his duties, which made him so eminently successful. He studied the lessons he was to teach, thoroughly, that he might impart instruction with that freshness and interest which such study would give; he studied his scholars, thoroughly, that he might adapt his teachings to their several capacities, encouraging the diffident and sluggish, restraining the forward, and rousing the listless and careless to unwonted interest and energy; he studied, too, their moral natures, and sought to wake in their youthful hearts aspirations for goodness and purity; and he studied whatever would enlarge his sphere of thought, intelligence, and professional usefulness.

Such a teacher was sure to rise in reputation; slowly, perhaps, but certainly, and hence it need not surprise us to learn that, within two years, he was associate principal of the Newburyport High School, having charge of the English department. Here, for twelve years, he was associated with Roger S. Howard, Esq., one of the most eminent teachers in Massachusetts, and how well he fulfilled his duties, Mr. Howard, who survived him, testifies. The same intense fondness for study characterized him, leading him to acquire a very competent knowledge of the Latin language, and something of the Greek; the

same earnest and conscientious performance of all his school duties, and delight in them, was manifested here as in his humbler position. It was while occupying this post, that he first began to come before the public as a lecturer. He was an active and prominent member of the Essex County Teachers' Association, one of the most efficient educational organizations in Massachusetts, and delivered before that body several lectures, which Hon. Horace Mann characterized as the best ever delivered before that or any other body. Of one of these, on "*The Mutual Duties of Parents and Teachers*," six thousand copies were printed and distributed (3000 of them at Mr. Mann's expense,) throughout the state. Mr. Page's powers as an orator and debater, were of a very high order; he possessed, says Mr. Mann (himself an orator of no mean powers,) "that rare quality, so indispensable to an orator, *the power to think, standing on his feet, and before folks.*" As a teacher, he exhibited two valuable qualifications; the ability to turn the attention of his pupils to the principles which explain facts, and in such a way that they could see clearly the connection; and the talent for reading the character of his scholars, so accurately, that he could at once discern what were their governing passions and tendencies, what in them needed encouragement and what repression. Thus, useful, active, and growing in reputation, Mr. Page remained at Newburyport till December, 1844.

In the winter preceding, the legislature of New York, wearied with the costly, but unsuccessful measures which, year after year, had been adopted for the improvement of her public schools, had appointed a committee of its own body, warm friends of education, to visit the normal schools of Massachusetts, and make a report thereon. The committee attended to their duties, and made an elaborate report in favor of the adoption of the normal school system. That report was adopted, and an appropriation of ten thousand dollars outfit, and ten thousand dollars per annum for five years, was voted, to establish a normal school, as an experiment. The friends of education in New York felt that, liberal as this appropriation was, every thing depended upon securing the right *man* to take charge of it, and long and carefully did they ponder the question, who that man should be. Mr. Page's reputation had already outrun the town and the county in which he resided; and, on the recommendation of Hon. Horace Mann, and other friends of education in Massachusetts, Prof. (afterward Bishop,) Potter, Col. Young, and other members of the committee, entered into correspondence with him, on the subject. In reply to the first communication, he addressed numerous inquiries to the committee, concerning the plan proposed for the organization and management of the school.

These questions were so pointed, and so well chosen, that Col. Young, on hearing them, at once exclaimed, "That is the man we need," and expressed himself entirely satisfied, without any further evidence. So cautious, however, were the committee, that it was decided that, before closing the negotiation, Dr. Potter should visit Newburyport, and have a personal interview with Mr. Page. He accordingly repaired thither, called at Mr. Page's residence, and found him in his every-day dress, and engaged in some mechanical work connected with the improvement of his dwelling. An interview of a single half hour so fully prepossessed him with Mr. Page's personal bearing and conversation, that he at once closed the negotiations with him, and secured his services as principal of the New York State Normal School.

Mr. Page closed his connection with the Newburyport High School about the middle of December, 1844; not without numberless demonstrations of regret and affectionate regard on the part of his pupils and friends. While on his way to Albany, he spent a night with Mr. Mann, in Boston, and the new duties he was about to undertake, the obstacles and difficulties, the opposition and misrepresentations he would meet, and the importance and necessity of success, formed themes of converse which occupied them till the early morning hours; in parting, Mr. Mann said to Mr. Page, as a veteran commander might have said to a youthful officer going to lead a forlorn hope, "Succeed or Die." The words sank deep into his heart; they were adopted as his motto in the brief but brilliant career which followed; and once, on recovering from a dangerous illness, he reminded his friend of his injunction, and added, "I thought I was about to fulfill the last alternative." He arrived at Albany a few days before the commencement of the "experiment," as the normal school was designated, and found every thing in a chaotic state; the rooms intended for its accommodation, yet unfinished; there was no organization, no apparatus, and indeed very few of the appliances necessary to a successful beginning; while the few were hoping, though not without fear, for its success, and the many were prophesying its utter failure. From this chaos, the systematic mind of Mr. Page soon evolved order; full of hope, and confident of the success of the normal school system, himself, he infused energy and courage into the hearts of its desponding friends, and caused its enemies to falter, as they saw how all obstacles yielded to the fascination of his presence, or the power of his will. The school commenced with twenty-five scholars, but ere the close of its first term, the number had increased to one hundred. At the commencement of the second term, two hundred assembled for instruction. From this time its course was onward; every term

increased its popularity; and the accommodations provided for it, large as they were, were soon crowded. For the first three years it had to contend with numerous and unscrupulous foes; some of whom attacked the system, others its practical workings, others still, who were strangers to his person, attacked the character of the principal of the school. Meantime, Mr. Page labored indefatigably; against the assaults upon the organization, or its practical operations, he interposed able, manly, and courteous defenses; those which were leveled at himself, he bore in silence; but no man, whatever his position in the state, and however bitter might have been his hostility to the school, or to its principal, ever came within the magnetism of his presence and influence, without being changed from an enemy to a friend. Among the most decided, as well as the most conscientious opposers of the normal school, was the Hon. Silas Wright; indeed, in his election as governor, the enemies of the school claimed a triumph, and counted largely on his eminent abilities to aid them in putting it down; but a very few months' residence in Albany converted this man, of strong and determined will, into one of its sincerest friends. During the vacations of the school, Mr. Page gave himself no rest; he visited different parts of the state, attended teachers' institutes, lectured day after day, and, wherever he went, removed prejudices, cleared up doubts, and won golden opinions. Every such visit drew a large number of pupils to the school from the section visited the ensuing term. The state superintendent was accustomed to say, "that he needed only to look at the catalogue of the normal school to tell where Mr. Page had spent his vacations."

Before four years had passed, the school had ceased to be an "experiment;" it was too firmly rooted in the hearts of the people to be abandoned, and the opposition, which had at first been so formidable, had dwindled into insignificance. But the toil requisite to accomplish this, had been too arduous for any constitution, however vigorous, to endure. The autumnal term of 1847 found him cheerful and hopeful as ever, but with waning physical strength; he sought (an unusual thing for him,) the aid of his colleagues in the performance of duties he had usually undertaken alone, and at length consented to take a vacation of a week or two during the Christmas holidays. Alas! the relaxation came too late; the evening before he was to leave, there was a meeting of the faculty at his residence; he was cheerful, but complained of slight indisposition, and retired early. With the night, however, came violent fever, and restlessness, and by the morning light, the physicians in attendance pronounced the disease pneumonia. At first the attack excited little alarm, but it soon

became evident that his overtasked vital powers had not the ability to resist the violence of the disorder. On the fourth day, he expressed to a friend his conviction that he should not recover. The severity of the disease soon increased, and, on the morning of January 1st, 1848, he passed away.

Six months before his death, he had, in company with one of his colleagues, made a brief visit to his former home, at Newburyport; and, while visiting the beautiful cemetery there, he stopped suddenly near a shady spot, and said, "here is where I desire to be buried." The sad funeral train which bore the clay that once had been his earthly habitation, from Albany to Newburyport, laid it sadly, yet hopefully, in that quiet nook, to repose till the archangel's trump shall be heard, and the dead be raised.

His life had been short, as men count time; he lacked six months of completing his thirty-eighth year when he was summoned to the better land; but, if life be reckoned by what is accomplished, then had his life been longer far than that of the antediluvian patriarchs. Of the hundreds of teachers who were under his care at Albany, there was not one who did not look up to him with admiration and love; not one who did not bear, to some extent, at least, the impress of his character and influence; and, it is doing no injustice to those who have so worthily succeeded him, to say that a very large part of the progress which the Empire State has made in the cause of education, during the past ten years, has been from the reflex influence of his spirit and teachings upon those who were his pupils. Nor is this influence confined to New York; other states feel it; even now, men, who were trained under him at Albany, are occupying high positions in the cause of education in several of the Western States; and gifted women, who, under his teachings, were moved to consecrate themselves to the holy duty of training the young, are now at the head of seminaries and female schools of high order, extending his influence in widening circles over the boundless prairies of the West.

Our brief narrative exhibits, we think, clearly what were the marked traits of Mr. Page's character; industry, perseverance, decision, energy, great executive ability, ready tact, and conscientious adherence to what he regarded as duty. But no language can describe the fascination of his manner, the attraction of his presence, his skill in what he was accustomed to call the *drawing-out* process, or his tact in making all his knowledge available. His familiar lectures to his pupils on subjects connected with the teacher's life and duties, could they be published, would form an invaluable hand-book for

teachers. He possessed, beyond most men, the happy talent of *always saying the right thing at the right time.* In personal appearance, Mr. Page was more than ordinarily prepossessing,—of good hight and fine form, erect and dignified in manner, scrupulously neat in person, and easy in address, he was a living model to his pupils, of what a teacher should be. Aside from a few lectures, published at different times, to some of which we have already alluded, Mr. Page left but one published work,—"*The Theory and Practice of Teaching,*" a work which has had a large circulation, and one which no teacher can afford to be without.

As evidence of the estimation in which Mr. Page was held by the distinguished teachers with whom he had been associated, we subjoin a portion of the addresses made on the subject, at the meeting of the American Institute of Instruction, on the announcement of his death.

Mr. Gideon F. Thayer said Mr. Page possessed a clear and logical mind, a sound judgment, and remarkable powers of discrimination; decision and firmness for all occasions, unwavering integrity, and a fearless exercise of his own rights without infringing on the rights or wounding the sensibilities of others. Dignity, affability, and courtesy, were so beautifully blended in his manners, as to secure respect and conciliate regard.

He began to teach when quite young, and, struggling with difficulties, neither few nor small, arose at last, through various important grades, to the highest rank in his profession,—being, at the time of his death, the principal of the state normal school, in the capital of New York. And although he had to encounter distrust and opposition, on assuming this extremely responsible charge, he, in a short period of time, lived down these obstacles, which a blind prejudice against the institution had generated, and died,—if not without an enemy,—leaving a multitude of devoted and sorrowing friends.

The secret of his success was found in the characteristics above mentioned, in his thorough conscientiousness, his religious principle, his fidelity in duty, connected with his self-faith, his diligence, and his indomitable will. He felt that he *could*,—he *resolved*,—he *conquered!*

He was a man of genuine modesty, and felt, to the day of his death, not as though he had fully attained and were already perfect; but constantly strove for additional acquisitions to the very liberal stock which his industry and perseverance had secured to him.

The last time I had the pleasure of seeing him, was in November, 1847, when, in a discussion upon the value of the study of the classics, he intimated that he had become somewhat familiar with the Latin, but had not made much progress in the Greek. "I intend, however," he added with enthusiasm, "to master that too, within the coming year, if my life is spared." Alas that the condition could not be fulfilled!

He thus filled up the measure of his life; not only in term-time, when the labors of his school occupied his mind and called for all his energies; but, in his vacations, when his exhausted powers demanded relaxation, he was still in harness, visiting schools, institutes, and conventions of teachers, throughout the broad surface of the Empire State; teaching, lecturing, and aiding those who needed his efficient assistance in the great work of common school education. To these supererogatory labors is to be attributed his early decline; he became the victim of excessive mental and bodily toil; sacrificing his life to his insatiable desire to benefit his race.

In debate, Mr. Page was able, candid, and forcible. He was blessed with a noble figure, a manly bearing, and great personal comeliness; all which were lighted up and adorned by an intelligence that flashed from his fine eye and beamed from the lineaments of his countenance; while a voice of much compass and

sweetness added its charm, and completed the outline of a most accomplished and eloquent orator.

His labors among us in this Institute, were of the most valuable kind. Among the lectures which he delivered to us, was one on the reciprocal duties of parents and teachers, six thousand copies of which were printed and distributed over the land; doing good to all parties interested, and furnishing lessons of wisdom, which will continue to bless the age, though their author has passed to his high reward.

This, and his larger work, will now be more dearly cherished, since his task on earth is finished; and will, as we trust, be a means of inciting multitudes to enlightened and judicious action, in the great work of training the child for his heavenly destiny.

In conclusion, the speaker said he would not enlarge on the character of the deceased. It was too well known to need his feeble eulogium. It was written in letters of living light on the walls of the various institutions, with which the deceased had been connected. It was impressed in ineffaceable lines on the tablets of the hearts of those who knew him, and especially of those whose early steps in the path of knowledge and virtue he had led with parental solicitude, and of his more recent pupils, prepared, by his instruction and wise counsel, for the duties of the teacher's vocation.

He would, therefore, by the permission of the chair, offer, for the adoption of the Institute, the following resolutions.

Resolved, That, in the demise of DAVID P. PAGE, the cause of education has lost an efficient friend, our fraternity an able and faithful coadjutor, and the community a member devoted to its highest and most sacred interests.

Resolved, That, while this Institute laments the bereavement of a warmly-esteemed and most worthy brother, its members will not cease to cherish the remembrance of his high aims, his spotless life, his reverence for religion, his singular devotion to the cause of man, and his consequent success and triumph over the difficulties of his vocation.

Resolved, That we hold the life and character of Mr. Page as a valuable legacy to the teacher, the citizen, and the philanthropist; and feeling that, though dead, he yet speaketh, we will endeavor to make his example a model for our imitation, as teachers, as men, and as citizens.

Resolved, That we deeply sympathize with the family of the deceased in this irreparable loss, and that a copy of these resolves be transmitted to the afflicted widow.

Resolved, That these resolutions be entered upon the records of the Institute.

Mr. Wm. H. Wells said, as a citizen of Newburyport, the field of Mr. Page's labors for several years previous to his removal from Massachusetts, I beg leave to offer a word in relation to the resolutions before us.

To the teachers of Essex County, the name of Mr. Page is a term of deep and solemn interest. We loved Mr. Page sincerely while living; and we now cherish a most affectionate regard for his memory. He advanced rapidly in our midst, from the humble charge of a district school, to such a degree of eminence and reputation in his profession, that we were unable to retain his services among us.

In rising to eminence himself, Mr. Page did much to honor and elevate the profession to which his life was devoted. Truly, a standard-bearer has fallen, and every teacher in the land has lost a sincere and devoted friend. England will as soon find another Thomas Arnold, as America another David P. Page.

We introduce the following as specimens of Mr. Page's method of illustrating different processes of teaching.

POURING-IN PROCESS.

This consists in *lecturing* to a class of children upon every subject which occurs to the teacher, it being his chief aim to bring before them as many facts in a limited time as possible. It is as if he should provide himself with a basket of sweetmeats, and every time he should come within reach of a child, should seize him, and compel him to swallow—regardless of the condition of his stomach—whatever trash he should happen first to force into his mouth. Children are indeed fond of sweetmeats, but they do not like to have them *administered*—and every physiologist knows there is such a thing as eating enough, even of an agreeable thing, to make one sick, and thus produce loathing forever after. Now many teachers are just such misguided caterers for the mind. They are ready to seize upon the *victims* of their kindness, force open their mental gullets, and pour in, without mercy and without discretion, whatever sweet thing they may have at hand, even though they surfeit and nauseate the poor sufferer. The mind, by this process, becomes a mere *passive recipient*, taking in without much resistance whatever is presented, till it is full.

"A passive recipient!" said one to his friend, "what is a *passive recipient?*" "A passive recipient," replied his friend, "is a *two-gallon jug*. It holds just two gallons, and, as it is made of potters' ware, it can never hold but just two gallons." This is not an unfit illustration of what I mean by making the mind a passive recipient. Whenever the teacher does not first excite inquiry, first prepare the mind by *waking it up* to a desire to know, and, if possible, to find out by itself, but proceeds to think *for* the child, and to give him the results, before they are desired, or before they have been sought for—he makes the mind of the child a *two-gallon jug*, into which he may pour just *two gallons*, but no more. And if, day after day, he should continue to pour in, day after day he may expect that what he pours in will *all run over*. The mind, so far as retention is concerned, will act like the jug; that is, a part of what is poured in to-day will be diluted by a part of that which is forced in to-morrow, and that again will be partially displaced and partially mingled with the next day's pouring, till, at length, there will be nothing characteristic left. But, aside from retention, there is a great difference between the jug and the mind. The former is inert material, and may be as good a jug, after such use, as before. But the mind suffers by every unsuccessful effort to retain.

This process of lecturing children into imbecility is altogether too frequently practiced; and it is to be hoped that intelligent teachers will pause and inquire, before they pursue it further.

The other process to which I wish to call attention, is that which, for the sake of distinguishing it from the first, I shall denominate the

DRAWING-OUT PROCESS.

This consists in asking what the lawyers call *leading questions*. It is practiced, usually, whenever the teacher desires to help along the pupil. "John," says the teacher, when conducting a recitation in Long Division, "John, what is the number to be divided called?" John hesitates. "Is it the dividend?" says the teacher. "Yes, sir; the dividend." "Well, John, what is that which is left, after dividing, called?—the remainder—is it?" "Yes, sir." A visitor now enters the room, and the teacher desires to show off John's talents. "Well, John, of what denomination is the remainder?"

John looks upon the floor.

"Is n't it always the same as the dividend, John?"

"Yes, sir."

"Very well, John," says the teacher, soothingly, "what denomination is this dividend?" pointing to the work on the board. "Dollars, is it not?"

"Yes, sir; dollars."

"Very well; now what is this remainder?"

John hesitates.

"Why, *dollars* too, is n't it?" says the teacher.

"Oh yes, sir, *believe!*" says John, energetically, while the teacher complacently looks at the visitor, to see if he has noticed how *correctly* John has answered!

A class is called, to be examined in history. They have committed the text-book to memory; that is, they have learned the *words*. They go on finely for a time. At length one hesitates. The teacher adroitly asks a question in the language of the text. Thus: "*Early in the morning, on the 11th of September*, what did *the whole British army* do?" The pupil, thus timely reassured, proceeds: "*Early in the morning, on the 11th of September, the whole British army*, drawn up in two divisions, commenced the expected assault." Here again she pauses. The teacher proceeds to inquire: "Well—'Agreeably to the plan of Howe, the right wing' did what?"

Pupil. "*Agreeably to the plan of Howe, the right wing*"—

Teacher. "*The right wing, commanded by* whom?"

Pupil. "Oh! '*Agreeably to the plan of Howe, the right wing, commanded by* Knyphausen, made a feint of crossing the Brandywine, at Chad's Ford,'" &c.

This is a very common way of helping a dull pupil out of a difficulty; and I have seen it done so adroitly, that a company of visitors would agree that it was wonderful to see how thoroughly the children had been instructed!

I may further illustrate this *drawing-out* process, by describing an occurrence, which, in company with a friend and fellow-laborer, I once witnessed. A teacher, whose school we visited, called upon the class in Colburn's First Lessons. They rose, and in single file marched to the usual place, with their books in hand, and stood erect. It was a very good-looking class.

"Where do you begin?" said the teacher, taking the book.

Pupils. On the 80th page, third question.

Teacher. Read it, Charles.

Charles. (*Reads.*) "A man, being asked how many sheep he had, said that he had them in two pastures; in one pasture he had eight; that three-fourths of these were just one-third of what he had in the other. How many were there in the other?"

Teacher. Well, Charles, you must first get one-fourth of eight, must you not?

Charles. Yes, sir.

Teacher. Well, one-fourth of eight is two, is n't it?

Charles. Yes, sir; one-fourth of eight is two.

Teacher. Well, then, three-fourths will be three times two, won't it?

Charles. Yes, sir.

Teacher. Well, three times two are six, eh?

Charles. Yes, sir.

Teacher. Very well. (A pause.) Now the book says that this six is just one-third of what he had in the other pasture, do n't it?

Charles. Yes, sir.

Teacher. Then, if six is one-third, three-thirds will be—three times six, won't it?

Charles. Yes, sir.

Teacher. And three times six are—eighteen, ain't it?

Charles. Yes, sir.

Teacher. Then he had eighteen sheep in the other pasture, had he?

Charles. Yes, sir.

Teacher. Next; take the next one.

At this point I interposed, and asked the teacher if he would request Charles to go through it alone. "Oh, yes," said the teacher, "Charles, you may do it again." Charles again read the question, and—looked up. "Well," said the teacher, "You must first get one-fourth of eight, must n't you?" "Yes, sir." "And one-fourth of eight is two, is n't it?" "Yes, sir." And so the process went on as before, till the final eighteen sheep were *drawn out* as before. The teacher now looked round, with an air which seemed to say, "Now, I suppose you are satisfied."

"Shall *I* ask Charles to do it again?" said I. The teacher assented. Charles again read the question, and again—looked up. I waited, and he waited;—but the teacher could *not* wait. "Why, Charles," said he, impatiently; "you want one-fourth of eight, do n't you?" "Yes, sir," said Charles, promptly; and I

thought best not to insist further at this time upon a repetition of "*yes, sir*," and the class were allowed to proceed in their own way.

This is, indeed, an extreme case; and yet it is but a fair sample of that teacher's method of stupefying mind. This habit of assisting the pupil, to some extent, is, however, a very common one, and as deleterious to mind as it is common. The teacher should at once abandon this practice, and require the scholar *to do the talking* at recitation. I need hardly suggest that such a course of *extraction* at recitation, aside from the waste of time by both parties, and the waste of strength by the teacher, has a direct tendency to make the scholar miserably superficial. For why should he study, if he knows from constant experience that the teacher, by a leading question, will relieve him from all embarrassment? It has often been remarked, that "the teacher makes the school." Perhaps in no way can he more effectually make an inefficient school, than by this *drawing-out process*.

I look upon the two processes just described, as very prominent and prevalent faults in our modern teaching; and if, by describing them thus fully, I shall induce any to set a guard upon their practice in this particular, I shall feel amply rewarded.

THE MORE EXCELLENT WAY.

It is always a very difficult question for the teacher to settle, "How far shall I help the pupil, and how far shall the pupil be required to help himself?" The teaching of nature would seem to indicate that the pupil should be taught mainly to depend on his own resources. This, too, I think is the teaching of common sense. Whatever is learned, should be so thoroughly learned, that the next and higher step may be comparatively easy. And the teacher should always inquire, when he is about to dismiss one subject, whether the class understand it so well that they can go on to the next. He may, indeed, sometimes give a word of suggestion during the preparation of a lesson, and, by a seasonable hint, save the scholar the needless loss of much time. But it is a very great evil, if the pupils acquire the habit of running to the teacher, as soon as a slight difficulty presents itself, to request him to remove it. Some teachers, when this happens, will send the scholar to his seat with a reproof perhaps; while others, with a mistaken kindness, will answer the question, or solve the problem themselves, as the shortest way to get rid of it. Both these courses are, in general, wrong. The inquirer should never be frowned upon; this may discourage him. He should not be relieved from labor, as this will diminish his self-reliance without enlightening him; for whatever is done *for* a scholar, without his having studied closely upon it himself, makes but a feeble impression upon him, and is soon forgotten. The true way is, neither to discourage inquiry nor answer the question. Converse with the scholar a little as to the principles involved in the question; refer him to principles which he has before learned, or has now lost sight of; perhaps call his attention to some rule or explanation before given to the class; go just so far as to enlighten him a little, and *put him on the scent*, then leave him to achieve the victory himself. There is a great satisfaction in discovering a difficult thing for one's self—and the teacher does the scholar a lasting injury, who takes this pleasure from him. The teacher should be simply suggestive, but should never take the glory of a victory from the scholar, by doing his work for him; at least, not until he has given it a thorough trial himself.

The skill of the teacher, then, will be best manifested, if he can contrive to awaken such a spirit in the pupil, that he shall be very unwilling to be assisted; if he can kindle up such a zeal, that the pupil will prefer to try again and again before he will consent that the teacher shall interpose. I shall never forget a class of boys, some fourteen or fifteen years of age, who, in the study of algebra, had imbibed this spirit. A difficult question had been before the class a day or two, when I suggested giving them some assistance. "*Not to-day, sir*," was the spontaneous exclamation of nearly every one. Nor shall I forget the expression that beamed from the countenance of one of them, when, elated with his success, he forgot the proprieties of the school, and audibly exclaimed, "*I've got it! I've got it?*" It was a great day for him; he felt, as he never before had felt, his own might. Nor was it less gratifying to me, to find that his fellows were still unwilling to know his method of solution. The next day a large number brought a solution of their own, each showing evidence of originality. A class

that has once attained to a feeling like this, will go on to educate themselves, when they shall have left the school and the living teacher.

As to the communication of knowledge, aside from that immediately connected with school-studies, there is a more excellent way than that of *pouring it in* by the process already described. It is but just that I should give a specimen of the method of doing this. I shall now proceed to do so, under the head of

WAKING UP MIND.

The teacher of any experience knows that, if he will excite a deep and profitable interest in his school, he must teach many things besides *book-studies*. In our common schools, there will always be a company of small children, who, not yet having learned to read understandingly, will have no means of interesting themselves, and must depend mainly upon the teacher for the interest they take in the school. This, to them, is perhaps the most critical period of their lives. Whatever impression is now made upon them will be enduring. If there they become disgusted with the dullness and confinement of school, and associate the idea of pain and repulsiveness with that of learning, who can describe the injury done to their minds? If, on the other hand, the teacher is really skillful, and excites in them a spirit of inquiry, and leads them in suitable ways to observe, to think, and to feel, that the school is a happy place even for children, it is one great point gained.

I may suggest here, then, that it would be well to set apart a few minutes once a day, for a *general exercise* in the school; when it should be required of all to lay by their studies, assume an erect attitude, and give their undivided attention to whatever the teacher may bring before them. Such a course would have its physiological advantages. It would relieve the minds of all for a few minutes. The erect attitude is a healthful one. It would also serve as a short respite from duty, and thus refresh the older scholars from study. I may further add, that, for the benefit of these small children, every general exercise should be conducted with reference to *them*, and such topics should be introduced as they can understand.

It is the purpose of the following remarks to give a *specimen* of the manner of conducting such exercises, for a few days, with reference to *waking up mind* in the school, and also in the district.

Let us suppose that the teacher has promised that, on the next day, at ten minutes past ten o'clock, he shall request the whole school to give their attention five minutes, while he shall bring something there to which he shall call the attention, especially of the little boys and girls under seven years of age. This very announcement will excite an interest both in school and at home; and when the children come in the morning, they will be more wakeful than usual till the fixed time arrives. It is very important that this time should be fixed, and that the utmost punctuality should be observed, both as to the beginning and ending of the exercise at the precise time.

The teacher, it should be supposed, has not made such an announcement without considering what he can do when the time arrives. He should have a well-digested plan of operation, and one, which he knows beforehand, that he can successfully execute.

Let us suppose that, in preparing for this exercise, he looks about him to find some object which he can make his *text;* and that he finds upon his study-table an *ear of corn*. He thinks carefully what he can do with it, and then, with a smile of satisfaction, he puts it in his pocket for the "general exercise."

In the morning he goes through the accustomed duties of the first hour, perhaps more cheerfully than usual, because he finds there is more of animation and wakefulness in the school. At the precise time, he gives the signal agreed upon, and all the pupils drop their studies and sit erect. When there is perfect silence and strict attention by all, he takes from his pocket the ear of corn, and in silence holds it up before the school. The children smile, for it is a familiar object; and they probably did not suspect they were to be *fed* with corn.

Teacher. "Now, children," addressing himself to the youngest, "I am going to ask you only one question to-day about this ear of corn. If you can answer it, I shall be very glad; if the little boys an girls upon the front seat can not give the answer, I will let those in the next seat try; and so on, till all have tried, unless our time should expire before the right answer is given. I shall not be sur-

prised if none of you give the answer I am thinking of. As soon as I ask the question, those who are under seven years old, that think they can give an answer, may raise their hand. WHAT IS THIS EAR OF CORN FOR?"

Several of the children raise their hands, and the teacher points to one after another, in order, and they rise and give their answers.

Mary. It is to feed the geese with.

John. Yes, and the hens too, and the pigs.

Sarah. My father gives corn to the cows.

By this time the hands of the youngest scholars are all down, for, having been taken a little by surprise, their knowledge is exhausted. So the teacher says that those between seven and ten years of age may raise their hands. Several instantly appear. The teacher again indicates, by pointing, those who may give the answer.

Charles. My father gives corn to the horses, when the oats are all gone.

Daniel. *We* give it to the oxen and cows, and we fat the hogs upon corn.

Laura. It is good to eat. They shell it from the cobs, and send it to mill, and it is ground into meal. They make bread of the meal, and we eat it.

This last pupil has looked a little further into domestic economy than those who answered before her. But, by this time, perhaps before, the five minutes have been nearly expended, and yet several hands are up, and the faces of several are beaming with eagerness to tell their thoughts. Let the teacher then say, "We will have no more answers to-day. You may think of this matter till to-morrow, and then I will let you try again. I am sorry to tell you that none of you have mentioned the use I was thinking of, though I confess I expected it every minute. I shall not be surprised if no one of you give this answer to-morrow. I shall now put the ear of corn in my desk, and no one of you must speak to me about it till to-morrow. You may now take your studies."

The children now breathe more freely, while the older ones take their studies, and the next class is called. In order to success, it is absolutely necessary that the teacher should positively refuse to hold any conversation with the children on the subject, till the next time for "general exercise."

During the remainder of the forenoon, the teacher will very likely observe some signs of thoughtfulness on the part of those little children who have been habitually dull before. And, perhaps some child, eager to impart a new discovery, will seek an opportunity to make it known during the forenoon. "Wait till to-morrow," should be the teacher's only reply.

Now let us follow these children as they are dismissed, while they bend their steps toward home. They cluster together in groups, as they go down the hill, and they seem to be earnestly engaged in conversation.

"I do n't believe it has any other use," says John.

"Oh, yes, it has," says Susan; "our teacher would not say so, if it had not. Besides, did you not see what a knowing look he had, when he drew up his brow, and said he guessed we could n't find it out?"

"Well, I mean to ask my mother," says little Mary; "I guess she can tell."

By and by, as they pass a field of corn, Samuel sees a squirrel running across the street, with both his cheeks distended with "*plunder*."

At home, too, the ear of corn is made the subject of conversation. "What is an ear of corn for, mother?" says little Mary, as soon as they have taken a seat at the dinner table.

Mother. An ear of corn, child? why, do n't you know? It is to feed the fowls, and the pigs, and the cattle; and we make bread of it, too—

Mary. Yes, we told all that; but the teacher says that is not all.

Mother. The *teacher?*

Mary. Yes, ma'am; the teacher had an ear of corn at school, and he asked us what it was for; and, after we had told him every thing we could think of, he said there was another thing still. Now I want to find out, so that *I* can tell him.

The consequence of this would be that the family—father, mother, and older brothers and sisters—would resolve themselves into a committee of the whole on the ear of corn. The same, or something like this, would be true in other families in the district; and, by the next morning, several children would have something further to communicate on the subject. The hour would this day be awaited with great interest, and the first signal would produce perfect silence.

The teacher now takes the ear of corn from the desk, and displays it before the school; and quite a number of hands are instantly raised, as if eager to be the first to tell what other use they have discovered for it.

The teacher now says, pleasantly: "The use I am thinking of, you have all observed, I have no doubt; it is a very important use indeed; but, as it is a little out of the common course, I shall not be surprised if you can not give it. However, you may try."

"It is good to boil!"* says little Susan, almost springing from the floor as she speaks.

"And it is for squirrels to eat," says little Samuel. "I saw one carry away a whole mouthful, yesterday, from the cornfield."

Others still mention other uses, which they have observed. They mention other animals which feed upon it, or other modes of cooking it. The older pupils begin to be interested, and they add to the list of uses named. Perhaps, however, none will name the one the teacher has in his own mind; he should cordially welcome the answer, if perchance it is given; if none should give it, he may do as he thinks best about giving it himself on this occasion. Perhaps, if there is time, he may do so—after the following manner:—

"I have told you that the answer I was seeking was a very simple one; it is something you have all observed, and you may be a little disappointed when I tell you. The use I have been thinking of for the ear of corn is this:—*It is to plant. It is for seed*, to propagate that species of plant called corn." Here the children may look disappointed, as much as to say, "we knew that before."

The teacher continues: "And this is a very important use for the corn; for if for one year none should be planted, and all the ears that grew the year before should be consumed, we should have no more corn. This, then, was the great primary design of the corn; the other uses you have named were merely secondary. But I mean to make something more of my ear of corn. My next question is:—Do OTHER PLANTS HAVE SEEDS?"†

Here is a new field of inquiry. Many hands are instantly raised; but, as the five minutes by this time have passed, leave them to answer at the next time.

"*Have other plants seeds?*" the children begin to inquire in their own minds, and each begins to think over a list of such plants as he is familiar with. When they are dismissed, they look on the way home at the plants by the roadside, and when they reach home, they run to the garden. At the table, they inquire of their parents, or their brothers and sisters.

At the next exercise, they will have more than they can tell in five minutes, as the results of their own observation and research. When enough has been said by the children, as to the plants which have seeds, the next question may be:—Do ALL PLANTS HAVE SEEDS? This question will lead to much inquiry at home, wherever botany is not well understood. There are many who are not aware that all plants have seeds. Very likely the ferns (common brakes,) will be noticed by the children themselves. They may also name several other plants which do not exhibit their apparatus for seed-bearing very conspicuously. This will prepare the way for the teacher to impart a little information. Nor is there any harm in doing so, whenever he is satisfied that the mind has been suitably exercised. The mind is no longer a "passive recipient;" and he may be sure that, by inquiry, it has increased its *capacity to contain*, and any fact which now answers inquiry, will be most carefully stored up.

The next question may be:—Do TREES HAVE SEEDS? As the children next go

* The children themselves will be sure to find some new answers to such questions as the above. In giving in substance this lecture to a gathering of teachers, in the Autumn of 1845, in one of the busy villages of New York, where, also, the pupils of one of the district schools were present, by invitation, I had described a process similar to that which has been dwelt upon above. I had given the supposed answers for the first day, and had described the children as pressing the question at home. When I had proceeded as far as to take up the ear of corn, the second day, and had spoken of the possibility that the true answer to the question might not be given, I turned almost instinctively to the class of children at my right, saying, "*Now what is the ear of corn for?*" A little boy, some six years of age, who had swallowed every word, and whose face glowed as if there was not room enough for his soul within him, bounded upon his feet, and forgetting the publicity of the place, and the gravity of the chairman of the meeting, clapping his hands forcibly together, "*It's to pop!*" he exclaimed emphatically, very much to the amusement of the audience. His mind had been *waked up*.

† *Plant* is here used in the popular sense.

out, their eyes are directed to the trees above them. The fruit-trees, the walnut, the oak, and perhaps the pine, will be selected as those which have seeds. They will, however, mention quite a number which do not, or which they think do not have seeds. Among these may be the elm, the birch, and the Lombardy poplar. After hearing their opinions, and the results of their observations, take one of their exceptions, as the subject of the next question :—*Does the elm have seeds?* This will narrow their inquiries down to a specific case, and every elm in the district will be inquired of as to its testimony on this point.

If the children can any of them collect and give the truth in the matter, so much the better; but if they, after inquiring of their parents and their grandparents, as I have known a whole school to do, come back, insisting that the elm has no seeds; after hearing their reasons for their belief, and perhaps the opinions of their parents, you may promise to tell them something about it at the next exercise. This will again awaken expectation, not only among the children but among the parents. All will wish to know what you have to bring out.

Great care should be taken not to throw any disparagement upon the opinions of parents. After giving the signal for attention, you may proceed as follows :—

"*Has the elm-tree any seeds?* Perhaps, children, you may recollect, after the cold winter has passed away, that, along in the latter part of March, or the first of April, we sometimes have a warm, sunny day. The birds perhaps appear and begin to sing a little, and as you look up to the elm, you notice that its buds seem to swell, and you think it is going to put out its leaves. Every body says we are going to have an early spring. But, after this, the cold, frosty nights and windy days come on again, and then you think the leaves can not come out so early. Now, if you observe carefully, the leaves do not come out till about the 20th of May, or perhaps the 1st of June. Did you ever see any thing like what I have described?"

"Yes, sir; we remember that."

"Well, the next time you see the buds begin to open, just break off a twig of a good large tree, and you will find they are *not the leaf-buds*. But, if you will watch them carefully for two or three weeks, you will find that each bud will put out some beautiful little flowers, brightly colored, and slightly fragrant. If you will still continue to watch them, you will find, as the flowers fall off, that seed-vessels are formed, shaped very much like the parsnip seed. These will grow larger and larger every day, and by and by they will turn brown, and look as if they were ripe. Just about this time the leaves will come out; and soon after, these seeds, during some windy day or night, will all fall off. The ground will be covered with thousands of them. Perhaps you have seen this."

"Yes, sir," says John; "Grandpa calls that *elm-dust*."

"Perhaps next year you can watch this, and ask your parents to examine it with you. But the five minutes are ended."

Now, information thus communicated will never be forgotten. The mind, having been put upon the stretch, is no longer a *passive recipient*.

The next question :—How are seeds disseminated?—(of course explaining the term—"*disseminated*.")

This will bring in a fund of information from the pupils. They will mention that the thistle-seed *flies*, and so does the seed of the milkweed; that the burs of the burdock, and some other seeds, are provided with hooks, by which they attach themselves to the hair of animals or the clothing of men, and *ride* away to their resting-place, which may be a hundred miles off. Some fall into the water, and *sail* away to another shore. Some, like the seed of the touch-me-not, are thrown to a distance by the bursting of the elastic pericarp; others, as nuts and acorns, are carried by squirrels, and buried beneath the leaves. These facts would mostly be noticed by children, when once put upon observation.

Next question :—*Are plants propagated in any other way than by seeds?*

This question would call their attention to the various means of natural and artificial propagation, by layers, by offsets, by suckers, by grafting, by budding, &c.

Again :—*Have any plants more ways than one of natural propagation?* Some have one way only—by seeds, as the annual plants; some have two—by seeds, and by roots, as the potato; some have three—as the tiger-lily, by side-bulbs from the roots, by *stalk-bulbs*, and by the seeds. This can be extended indefinitely.

Let it be remembered that the above has been given *simply as a specimen* of

what could easily be done by an ingenious teacher, with as common a thing as an ear of corn for the text. Any other thing would answer as well. A chip, a tooth, or a bone of an animal, a piece of iron, a feather, or any other object, could be made the text for adroitly bringing in the *uses of wood*, the *food and habits of animals*, the *use and comparative value of metals*, the *covering of birds*, their *migration*, the *covering of animals*, &c., &c. Let the teacher but think what department he will dwell upon, and then he can easily select his *text*; and, if he has any tact, he can keep the children constantly upon inquiry.

The advantages of the above course are many and great.

1. *It immediately puts the minds of the children into a state of vigorous activity.* They feel that they are no longer *passive recipients*. They are incited to discover and ascertain for themselves. They are, therefore, profitably employed, both in and out of school; and, as a consequence, are more easily governed. A habit of observation is easily cultivated in them; and what an advantage is this for a child! It is almost unnecessary to remark that many people go through the world, without seeing half the objects which are brought within their reach. It would be the same to them if their eyes were half the time closed. If they travel through a country presenting the most beautiful scenery, or the most interesting geological features, they see nothing. They grow up, among all the wonders of God's works, amid all the displays of his wisdom, of his design, to no purpose. They study none of the plans of nature; and by all the millions of arrangements which God has made, to delight the eye, to gratify the taste, to excite the emotions of pleasure instead of pain, they are neither the happier nor the wiser. What a blessing, then, it is to a child, to put his mind upon inquiry; to open his eyes to observe what his Creator intended his intelligent creatures should behold, of his goodness, his wisdom, his power. And how far superior is he, who teaches a child to see for himself, and to think for himself, to him who sees and thinks *for* the child, and thus practically invites the pupil to close his own eyes, and grope in darkness through the instructive journey of life.

2. *It is of great service to the parents in the district, to have this waking-up process in operation.* Our children are sometimes our best teachers. Parents are apt to grow rusty in their acquirements, and it is, no doubt, one of the designs of providence, that the inquisitiveness of childhood should preserve them from sinking into mental inactivity. Who can hear the inquiries of his own child after knowledge, without a desire to supply his wants? Now it is right for the teacher to use this instrumentality to *wake up mind* in his district. Parents, by the course I have recommended, very soon become interested in these daily questions of the teacher; and they are often as eager to know what is the *next question* as the children are to report it. This course, then, will supply profitable topics of conversation at the fire-side, and very likely will encourage also the pursuit of useful reading. It will moreover soon awaken a deeper interest in the school, on the part of the parents. They will begin to inquire of one another as to this new measure; and when they find by conference that the feeling in this matter is becoming general, they will desire to visit the school, to witness this as well as the other operations of the teacher. This will secure parental co-operation; and thus, in every way, the influence of the school will be hightened. It is no small thing for a teacher to enlist the interest of his patrons in the success of his school; and this is the most happily done through the pupils themselves.

3. *It wakes up the teacher's own mind.* This is by no means the least important point to be gained. The teacher, by the very nature of his employment, by daily confinement in an unhealthy atmosphere, by teaching over and over again that with which he is quite familiar, by boarding with people who are inclined to be social, and by the fatigue and languor with which he finds himself oppressed every night, is strongly tempted to neglect his own improvement. There are but few who rise above this accumulation of impediments, and go on, in spite of them, to eminence in the profession. A large proportion of all who teach, rely upon the attainments with which they commence; and, in the course of two or three years, finding themselves behind the age, they abandon the employment. This is very natural. Any man who treads in a beaten track, like a horse in a mill, must become weary, however valuable the product may be which he *grinds out*. It is essential that he should keep his own interest awake by some exercise of his ingenuity, and that he should compel himself to be industrious by undertaking that which will absolutely demand study.

Engd by A.H. Ritchie

Wm. L. Phelps.

PRINCIPAL OF THE STATE NORMAL SCHOOL, AND THE
FANNUM PREPARATORY SCHOOL, OF NEW JERSEY.

XII. WILLIAM F. PHELPS.

William F. Phelps, the first principal of the State Normal School of New Jersey, was born at Auburn, New York, on the 14th of February, 1822—the oldest of three sons. His parents were intelligent and in comfortable circumstances, and gave to their children such educational advantages as the times and their means could afford. He was accordingly sent to such imperfect district schools as were to be found, at that period, in his native state.

In consequence of the manifest incompetency of his teachers, and of the barren results which followed their work, Mr. Phelps was frequently led, even at an early age, to reflect upon the absurdity of their methods, and upon the unprofitable character of the instruction they attempted to impart. He went with the greatest aversion to his senseless tasks, and his want of progress convinced him of the fundamental errors which characterized the prevalent mode of teaching. It was evident that this mode was not at all adapted to the nature and wants of the mind, and hence it failed to secure its development and progress.

In 1834, the Auburn High School was established, under the auspices of a ripe scholar and intelligent teacher, Albert Metcalf, A. M., of Massachusetts. This school being liberally supplied with blackboards, philosophical and astronomical apparatus, and being under the management of a polished gentleman, as well as a most efficient, kind, and affectionate teacher, soon attained a high character; and Mr. Phelps was transferred to its more genial atmosphere. Its strict discipline and rigorous instruction made a deep impression upon his mind and heart. He, however, felt keenly the effects of early misdirection, and though he profited much by the lessons of the high school, yet some of the advantages of his new position were lost through the effects of the habits already formed. It was at the high school that the benefits of classification and method were first exhibited to his mind; and the genial influence of kindness and affection, as educational forces, were first made apparent. But this school was too far in advance of the times, and of the intelligence of the community, to be properly appreciated. The teacher, after struggling against fearful odds, overtasked and disheartened, fell a victim to his devotion, and died on the field of his usefulness. Nothing now remained

to our pupil but the old district school and its repulsive associations.

Several ineffectual attempts were made by the parents of Mr. Phelps to install him in a commercial position. For several years, therefore, his time was divided between the farm in summer, and the country district school in winter.

It was while a pupil in the latter, in the winter of 1838–39, that his father was strongly impressed, by the schoolmaster, with the belief that William was abundantly competent to keep school. Accordingly, after spending the summer of 1839 on the farm, he was warned, in the autumn of that year, that he must "take a school" during the following winter. The proposition struck him with amazement, and he objected and even protested; but was obliged to obey. It would not be worth while to describe his long-continued and disheartening efforts "to get a school," nor to praise the distrust, and in some cases, the contempt with which his application was frequently received by narrow-souled trustees. After weeks of mortifying effort, he at length found a school in a retired neighborhood. This school was distinguished for its unpromising antecedents. Its record was one of battles fought between teachers and taught. The last of these had resulted in the discomfiture of his immediate predecessor, and his expulsion from the premises. This was, therefore, his first school. The building was in a crossing, where four roads met, in a low and forbidding spot. The only means of reaching the door was through the carriage track in the middle of the roadway. The school-house was, in dimensions, about eighteen by twenty-two feet. It had an old worn-out stove in the center, and the forms, or writing desks around the room. Surrounding the stove were seats made of slabs, with holes at each end, the legs crossing each other, and protruding at least two inches above the upper surface. These seats were about two and a half feet high, and were intended for little children. These arrangements, with an old rickety table, and a few shelves at one end, for the children's clothing, completed the outfit of the school in respect of furniture.

In these quarters, Mr. Phelps "kept a school," with sixty pupils of all ages, sexes, grades, and conditions, for four months and a half. The only notable characteristic of this school, was a tolerable degree of order, secured by constant exertion, and by a sort of omnipresence on the part of the teacher. A good feeling was maintained among both pupils and parents, and the reputation of the schoolmaster was established in that district for all time. But one incident of a somewhat striking character occurred to relieve the monotony of the session.

There was one family in the vicinity distinguished for the ungovernable character of its children. One of these children having one day openly defied the authority of the teacher, chastisement was inflicted upon the offender, in accordance with the theory and the practice of those days, made and provided. As the parents had conscientious scruples against juvenile obedience, these being abundantly manifested in their home practice, much indignation was felt by them at the success of the teacher in reducing the child to subjection, by means of corporeal punishment. Accordingly, a complaint was made before a justice, and a warrant was issued for Mr. P.'s arrest. He was held for his appearance at court, to answer to the grave charge of assault and battery.

Being quite young, and exceedingly sensitive, with no experience in the terrors of the law, he concluded that his character was lost irreparably. But the people of the district rallied to his support, rejoiced at his conquest of one of the barbarians, and the master's confidence was quickly restored. The complainant dared not go to the grand jury, and the prosecution dropped. The affair was, on the whole, a fortunate one for the neighborhood, and resulted in securing a wholesome state of subordination among its young ungovernables.

An incident of a more amusing character occurred during this first winter's experience in the life of a country schoolmaster. A certain family, residing a mile and a half from the school-house, and sending six children to the school, used to pack them all, young and old, into what is called a jumper, which consists of a crockery crate mounted upon a pair of runners, and in this plight they were sent to school. The horse was stabled at a neighbor's, and at night the precious freight was returned to the bosom of the family. It was the uniform practice then, as now in many quarters, for the teacher "to board around." It fell to Mr. Phelps' lot to be one of this lively sleighing party at night, during a part of that winter. In the morning he was obliged to make his way back to the school on foot, make the fire, and sweep the school-room, in order to be ready for the day's work by nine o'clock. We will permit him to describe his first visit to this family, in his own sprightly language, as communicated some time since, in a letter to the writer of this sketch. He says:—

"I never shall forget my first trip with this (the sleighing) party, nor my first meal with the family. There were seven children in all, and at home they were the most noisy and unmannerly set of urchins on this side of that mythical land, classically denominated 'bedlam.' Their voices, loud enough to startle the seven sleepers, could easily be heard across the street, when the house was closed. The mother

was one of the most industrious and tidy housekeepers I have ever met. With her shrill voice sounding above the clatter and confusion of the seven children, there was music such as would never soothe a nervous man to rest.

"Arriving at the house, we found a warm dinner 'smoking upon the table,' and it was not long before a general rush was made by the children, on some magic signal which I neither saw nor heard, for the gustatory onslaught. Being a stranger and somewhat diffident, I waited for an invitation to join in the work of destruction. At length the 'gude wife' spoke out in her highest key, and commanded me to 'come to the table.' A blessing was asked by the 'pater familias,' in a tone so low that I could scarcely distinguish a word, although sitting next him on the right. The last word was not uttered, before six forks went playing into a huge dish of potatoes, and thence, 'quick as thought,' into a plate of sliced ham, while the bread and other accompaniments disappeared as the dew before the sun of a summer morning. Here my modest reserve was again put to the test! I waited to be helped. Vain expectation! Desolate prospect for a half-starved schoolmaster! But the mother soon came to my relief, and in an instant, by a masterly stroke, she vanquished the accumulated bashfulness of seventeen years. Again, raising her voice to its highest pitch, she exclaimed, 'come now, you must help yourself. If you don't, you'll fare hard, for we haint got any manners here!' The thing was done. I at once 'fell to,' and helped myself; felt at home, and ever after, amidst all my experience in the barbarous practice of 'boarding round,' managed to adapt myself to the company I was in, and to keep my poor body several degrees above the point of starvation."

The succeeding summer was spent in the Auburn Academy, then under the charge of a very efficient corps of teachers. For several successive winters, Mr. Phelps taught district schools, often in retired neighborhoods, and amid discouraging circumstances. His plan was to teach in winter, and attend the academy in the summer, with a view to prepare for college. His success was uniformly marked, and he succeeded in securing the reputation of being one of the best teachers in the country. He became gradually impressed with the great utility of the blackboard, and his experience gave him more and more insights into the nature of the teacher's work, and the true dignity of his calling.

After an experience of five years as a teacher in the rural districts, Mr. Phelps was called upon to take charge of a large public school in the city of Auburn. This was a trying position. The buildings

were old, dilapidated, and inconvenient. There was but one room for the accommodation of one hundred and forty pupils of all grades. While the furniture, and other needful appliances for instruction and training, were of the most meager and unsatisfactory character.

While engaged in the conduct of this school, Mr. Phelps received notice of his appointment, by the county board of supervisors, as one of the first representatives to the New York State Normal School, which was opened in December, 1844. His impressions, gathered from the glowing accounts presented by the official descriptions of foreign normal schools, their comprehensive courses of study, their rigorous discipline, and their practical methods of training, were that they were far superior to our colleges, and believing that his native state, with her great resources and liberal educational policy, would not be found behind even the governments of Prussia, Switzerland, and France, in the endowment of her normal school, he at once gave up all thought of college, and enlisted in the new movement with all the enthusiasm of a Columbus, on his first voyage of discovery.

On the 16th of December, 1844, he for the first time took leave of his friends, and made his way to Albany, in order to be present at the opening of the school, which occurred on the 18th. The emotion which he felt on his first interview with such men as Samuel Young, Alonzo Potter, David P. Page, and Francis Dwight, was one of the greatest veneration. Noble men! They have all, with one exception, passed away, having sealed with their lives their devotion to the great cause of universal education and of human progress.

The school was opened, according to notice, on the 18th. Col. Young, who was then state superintendent of common schools, and chairman of the executive committee of the normal school, gave a lucid and able exposition of its nature and objects. Immediately thereafter, the exercises of the institution were commenced by Mr. Page, in that quiet and unpretending style so eminently his characteristic. There were but twenty-nine pupils present during the first day, and, amid the din of the carpenter's hammer and saw (for the apartments were yet incomplete,) the great work was commenced.

Mr. Page and his associates were all novices in the conduct of normal schools, and were obliged to "feel their way," as it were, amid many difficulties, and wholly unaided by the light of experience in the work of training teachers. The first six weeks were spent in a cursory review of the elementary branches of study. These subjects, treated as they were by the teachers, soon became dry and distasteful to those who had deemed themselves proficients in them long ago. Accordingly a change of programme was agreed upon, and all those

who, during the six weeks, had shown themselves qualified, were allowed to advance to higher studies. A class in algebra and physiology was accordingly formed; the former under the able mathematician, Perkins, and the latter under the leadership of Mr. Page himself. In this manner, the exercises of the first term of twelve weeks were conducted. Large accessions were constantly made to the number of the pupils, so that, before the end of the term, the school had increased to nearly one hundred pupils.

Thus far, the work had been preliminary and preparatory. None of those striking processes and results, so graphically described as characterizing the normal schools of Europe, had been realized. Mr. P's hopes were disappointed, and he regretted his choice. But, having unbounded confidence in Mr. Page, and trusting to time to correct all the errors, supply all the defects, and develop all the excellencies he had expected, he determined to hold fast and continue his normal life. The second term opened in May, 1855. With this term, the experimental school or school of practice was to be inaugurated, as one of the distinctive features of the normal school system for the training of teachers.

Having, by means of several long conversations with Mr. Page, upon the subject of teaching, as well as by intercourse with him in the capacity of a student, formed an intimate and favorable acquaintance with him, Mr. Phelps was designated by him as the person to organize this experimental school. He had thus the advantage of making upon the children the first impression, which proved to be a very pleasant and happy one. A strong attachment at once sprung up between the teacher and the pupils. This feature of the normal school establishment promised, in the outset, to be a highly successful one. Mr. P's term of service was fixed at two weeks. But before the expiration of this period, Mr. Page was taken seriously ill, and he was desired by the officers of the school to continue in charge of it until the principal's recovery. This detained him for six or eight weeks, and served to strengthen the ties between him and the children under his charge. At length, on the recovery of Mr. Page, he was allowed to return to his class, and the plan of rotating the teachers of this department was set in operation. But the change was injurious. The children no sooner became acquainted with a new teacher than he left them and a stranger was substituted. This led to difficulty and disorder. There was no uniformity either in the discipline or the instruction, and the experimental school became an object of dread to the pupil teachers, of aversion to the children, and of vexation and trouble to the principal, whose other duties allowed him but little opportunity to attend to its details.

A change of plan was accordingly determined upon, and it was proposed to place a permanent teacher or superintendent in charge of this department, subject to the advice and counsel of the principal of the normal school. It should be his duty to prescribe such regulations as might be necessary for the government of the school, to advise and direct the pupil-teachers during their term of practice, to notice and criticise their methods of teaching, to preserve order and uniformity in the school, and to train the pupil-teachers in the principles of their future calling. This plan was to go into effect at the commencement of the fall term of 1845. After mature deliberation, Mr. Phelps was chosen for this difficult, uninviting, and responsible position. He accepted it with reluctance, and entered upon its duties in October.

The plan succeeded. By it the school was redeemed from failure. Order was brought out of confusion, the children were happy, the pupil-teachers were again reassured, because pleasantly and profitably employed. Before the end of the term, so popular and successful was this department, that its capacity was doubled, and the tuition, which had been previously free, was fixed at twenty dollars per annum. So effective was the discipline and the instruction, as to exert a powerful influence upon the normal school, its methods, and its spirit. It served the purpose of a school of observation as well as practice, and many sound views of the nature and objects of education were here imbibed and carried forth into the schools of the state.

The constantly rotating teachers could not fail to produce constantly varying results. While one would secure the respect and affection of the children, and good order as a consequence, another would in a single day undo the good work of an entire week. These phenomena could not fail to provoke inquiry into their causes. The labors of different teachers were compared, their results were noted, and, after long observation, general principles were deduced and classified. These principles were at length produced in the form of lectures to the pupil-teachers, to their manifest interest and profit. Mr. Phelps occupied this position, trying but useful as it was, until the spring of 1852. Constant application to his work, with a view to master the difficulties which beset him, and to overcome all obstacles, produced at this time a serious derangement of his health. For one year he was a great sufferer from hemorrhage of the lungs and debility. He remained at his post, however, until even these physical weaknesses were overcome, and until the principles for the conduct of his "peculiar institution" were well established and embodied in its organization.

Finally, after having had some six hundred pupil-teachers pass in review before him, and after having labored faithfully to infuse into them his own life-giving spirit, he rested from these labors, and spent more than two years in travel and in the pursuits of business. During this time, his health became firmly established and his knowledge of men and things was greatly increased, by intercourse with the world.

Not long before the close of his connection with the experimental school at Albany, the degree of Master of Arts was conferred upon him by the trustees of Union College, at Schenectady.

In the summer of 1855, the first board of trustees of the New Jersey State Normal School, appointed under the legislative act of the preceding winter, elected Prof. Phelps, by a unanimous vote, principal of the new normal school, and called him at once to counsel with them in relation to their duties. Finding his qualifications adequate, they soon confidently committed the enterprise almost wholly to his management, imposing little or no restraint upon him except that which arose necessarily from the limited pecuniary resources at their disposal. Prof. Phelps adapted himself, with characteristic facility, to the new circumstances in which he was placed. He threw all his energies into the new enterprise, surmounted with skill the various difficulties with which the whole movement in New Jersey was at first embarrassed, and succeeded in a short time in opening the normal school under the happiest auspices, and with a very desirable degree of popular favor. It was not long before, under his management, the institution began to attract great attention, and visitors from the state and from abroad began to flock in to witness the arrangements, and the modes of discipline and instruction. It is remarkable that very few, even of those who were at first most prejudiced, ever visited the school without leaving it as friends. Indeed, hundreds of those who had originally been hostile to the movement, became the warmest friends and advocates of the school. When the new building was opened, and the requisite facilities were obtained for exhibiting the plan to the best advantage, it became a resort for multitudes; and, after the first public examination, the reputation of the principal and the school was established. Prof. Phelps has manifested a devotion to the interests of the school, and an ability in the whole and the detail of its management, which have already placed him in the front rank of the practical educators of our country, as one of the most efficient and intelligent leaders of the great educational movement in America.

XIII. AIMS OF THE STATE NORMAL SCHOOL OF NEW JERSEY.

BY PROF. DAVID COLE.

Being an address delivered at the closing exercises of the Farnum Preparatory School of New Jersey, July, 1857.

The distinguishing feature of the system of education which we have already inaugurated in our Normal and Preparatory Schools, and which we purpose to carry into effect throughout all our State Schools, consists in the fact, that it is adapted to the nature, the condition, the circumstances, the wants, and the prospects of the children to be educated. It is not an aimless, confused, spiritless thing, but a plan thoroughly digested in all its parts, constructed with a wise reference to the accomplishment of certain ends, admitted by all to be of transcendent importance to the individual, the State, and the nation, both for the present and for future time. It is believed to be in strict accordance with the laws of man's being, and suited to the right unfolding of his physical, mental, and moral nature. He has a body: its health, its comforts, are to be regarded. He has an intellect: its craving nature is to be satisfied, its power is to be brought out, its unfolding is to be directed, its appetite is to be fed with that which is strengthening and healthful, its spirit of research is to be animated and inspired with an enthusiasm for what is useful and profitable. He has a "faculty of discerning beauty, order, congruity, proportion, symmetry, excellence." It belongs to education to train it, to encourage and to stimulate it. He has a moral nature, a moral sense, which it is the work of education to quicken. It is the great governor of every thought, word, and action. Surely that form of training which leaves out of view this important part of man's compound being, can be developing only a very dangerous element in society. That knowledge is power was never denied. But it must not be forgotten that it is power for evil as well as for good. The strongest intellect and the most finished scholarship are powers which, when under the control of bad hearts, can shake the family or the social circle, or the political fabric, to its centre with the most disastrous throes and convulsions. Too often, alas! has the history of the past attested—too constantly, alas! does the experience of the present attest—the destructive energy of trained and cultivated intellect, obedient to the impulses of selfishness and ungoverned passion. In the plan of education which we seek to describe and commend to the admiration of the reader, therefore, the training of the moral nature holds prominent place. We seek to develop a power and an energy of mind under the direction of pure hearts and principles. We seek to awaken in youth an admiration of what is high, rational, good, and useful. Our plans of instruction are such as invest the

pursuit of knowledge with pleasure and delight, the practice of morality and religion with the consciousness that it brings its own reward, self-respect and genuine disinterestedness with loveliness and attraction. Does any one fail to see that in the past, these best, these highest and noblest ends, were too generally overlooked in our systems of instruction? Education is, without doubt, a science founded upon immutable laws. As well might one claim to understand astronomy without a knowledge of the laws that regulate the movement of the heavenly bodies, as claim to understand the training of youth to accomplish the true ends of their being without even an inquiry into the immutable laws and unerring indications which ought to be followed in such training. And if this remark be true, what miserable dabsters, what fatal triflers, have we often allowed to play with the bodies, the minds, the hearts of our children! And what sordid considerations have many persons permitted to blind their eyes to the highest interests of their offspring! Money in comparison with these interests is as the dust in the balance. Leave children with well-cultivated hearts and minds, and you leave them with a legacy superior in value to all the wealth of the world. Leave them the money which false notions have led you to hoard up instead of bestowing upon their education, and if their moral and mental culture has been neglected, it will certainly make them no happier, perhaps it will make them and others wretched, perhaps it will be the very means of their ruin. Illustrations of the truth of this remark are abundant, and within the observation of all. If then we are coming to an understanding of this matter, happy will it be for us if we at once determine to rectify our mistakes, and to avail ourselves on behalf of our children of the precious opportunities which, in the Providence of God, it is now ours to enjoy.

The general remarks which we have thus made will be better understood, if we exhibit, as we now propose to do, some of the more prominent and striking characteristics of our system in detail. A casual observer will not fail to see and be struck with all the features that we shall mention, if he should visit our schools. What we shall say will be drawn from an observation of our Normal and Preparatory Schools. We have made ourselves familiar with their workings and results, and are satisfied that if the people stand by these schools and support them as their almost unparalleled excellence deserves, they are capable of working, in a short time, a mighty change in the district schools of the State. They are centres of light, to be radiated in every direction. At two important points—Lambertville in Hunterdon, and Somerville in Somerset county—the trained teachers from the Normal Schools have been set at work, and are putting into practice the lessons which they learned at the Normal School with great success. Their "profiting is apparent to all." They were old teachers, who had laid aside for a time the authority of the school-room to avail themselves of the advantages of the Normal School. They do not look upon the time thus employed as unprofitably spent. Their training has inspired them with

a new spirit, and with clear, systematic, orderly, and well-defined conceptions of the great work to which they have devoted themselves. The people of these villages look upon them with admiration, and would not be induced to part with them on any consideration. Princeton, too, is about to furnish a fine new building, and to engage the services of a corps of these well-trained teachers. They have excited the respect of the people everywhere. Nearly fifty of them are already in the field, and they are commending the training which they have enjoyed by zealous and intelligent labor both in and out of the school-room. They are as a leaven by which we have a right to expect that the whole State will be speedily leavened.

If one looks into our system in its details, with a view to understand it thoroughly, the edifices, furniture, grounds, &c., will first of all attract his attention. They claim to be model school buildings with model appliances and surroundings, and we have yet to hear the first person say that they are not so. The buildings are spacious, constructed with a view to the physical comfort of teachers and students. They are well lighted, comfortably warmed, and thoroughly ventilated. They are so arranged as to admit of and to secure comfortable and orderly ingress and egress. They are supplied with cloak and hat and umbrella rooms, in which each pupil has his hook assigned, and in which at any time during school hours, every article of dress will be found in its appropriate place. The buildings are properly supplied with furniture which is itself an ornament, and contributes to the attractions of the school-rooms.

There is no reason in fact why this should not be so in all school buildings. The difference in cost between clumsy and neat desks is less than many think it is. The recitation-rooms, the library and reception apartments, the apparatus-room and laboratory, are all just what they should be, and form so pleasant a place of resort that one feels a delight in visiting them. Of course, the small schools in the rural districts do not require such large buildings, but they may be made equally delightful as places of resort, and they may have all these features about them as far as their circumstances require. And if the people are expected to visit them, they must be made what they ought to be in these respects. Many a parent has pitilessly sent his child for months and years to school in a building in which no small consideration would have tempted him to incarcerate himself for a day. No wonder that nobody loves schools; no wonder that nobody thinks any thing of education. If those things were schools, if that heartless and unmeaning process was education, then we are as much opposed to schools and education as anybody. If the acquisition of education necessarily involves the dispensing with pure air, or the cramping of young limbs, for many of those years of life which are of the greatest importance in the unfolding of the physical being, or the constant obtrusion of unsightly and disgusting objects before the eyes for many of those years during which only we can hope for the high culture of the taste, then away

with school education! Down with the ghastly spectre! Give us the open air in preference! Give us, far enough above this, the education, defective though it will be, which every child will be sure to acquire if permitted to rove freely through the pure fields, and daily read the lessons of the farm, the brook, the tree, the shrub, the flower, the valley, and the hill-top, the song of the birds, the glories of the heavens, or to commune with the voices of his own mysterious nature, and to study unguided the workings of his own inner life. No, these comfortable and beautiful and orderly arrangements of our buildings, together with the taste displayed in the laying out of the surrounding grounds, teach eloquently and constantly to the students and also to the visitors a great and most important lesson of themselves. They do more than all oral instruction to cultivate a love of neatness, symmetry, beauty. Illustration is the great thing in teaching. To introduce the study of æsthetics into a school whose appointments and surroundings are in direct contradiction to every emotion of love for the beautiful, is to introduce a miserable farce. One who habitually sees beauty, neatness, order about him will never witness or know of their opposites without pain. Men and even boys hesitate to enter neat parlors with mudded boots or shoes, and very few are so wanting in a sense of propriety as to expectorate upon a carpeted floor, or even to throw whittlings or papers upon neatly arranged and park-like walks. If we could keep our boys and girls constantly in such places, they would be put under habitual self-constraint. If on every entrance into their schoolhouses, children should be expected to attend to the cleanliness of their feet by paying proper respect to mats or rugs, or by exchanging the shoe for the clean, the light, and noiseless slipper, and to make an orderly disposition of the hat, the outside wrapper, and the umbrella, the moral effect would be incalculable. As it has been, those whose habits in these respects are carefully guarded at home have seen the teachings of the family circle so utterly contradicted at school, that they have come speedily to the practice of regarding them as so many effeminacies, so many womanly restraints, from which they have been anxious to be delivered as soon as possible.

Every thing in our Normal and Preparatory Schools is adapted to foster correct taste, and a love for the neat, the orderly, and the beautiful. And in these respects their value is beyond all price. No sum that can be named would express their worth, considered in the æsthetic aspect alone. The conveniences too with which these establishments are so liberally supplied deserve notice, and among them, none is more prominent than the wall slates, used in place of blackboards. We do not know that the remark will be credited by all, but teachers know that these wall slates, by the beauty and clearness with which they present the operations of the student, serve greatly to enhance the interest which he feels in what he has done or is doing. We do really believe that they are as great an advance upon the common boards, as the common boards were upon no boards at all. All these things strike the observer immediately upon

entrance into the building, together with the care and pains taken to keep the furniture, floors, &c., clean, neat, and free from defacements. An experienced teacher from abroad visited the Normal School building with us a few days ago, since the session closed. We conducted him through the house, exhibited to him every apartment, and found every nook and corner, as it always is, in perfect order. We expressed a regret that the school was not in session, and said that we should very much like him to witness the classes at work. Said he, "I can easily judge that the school must be one of great excellence merely from what I see of the condition of the furniture. It could not be in such beautiful preservation after a year and a half of use, without an excellent state of feeling and an habitual care on the part of all concerned." This would be the verdict of any competent judge. Water for drinking and washing purposes is conducted into the cloak-rooms; and mirrors, hair-brushes, combs, napkins, &c., are all at hand to remind the student that cleanliness, and order, and personal neatness are the laws of the place. So much for that part of our subject which relates to the buildings, the furniture, and grounds. We pass now to consider the working of the school itself.

One of the prominent characteristics is the perfect classification of the students. The classes are fixed, and the studies of each class are distinctly defined. It is quite possible to do this in a school where all pupils have the same end in view, and it ought to be done to as great an extent as it can be in every school, as it greatly facilitates and expedites the work to be accomplished. One of the greatest obstacles to this in our district schools is the great variety of text-books, and the unwillingness of parents to be at the expense of changing them. Nor is this unwillingness very surprising, since the teachers are so frequently changed, and every new man is for ousting the text-book of his predecessor. Here, however, this obstacle does not exist, all the books being furnished by the institution itself. The pupil is at no expense for books, unless he injures those lent him; in which case, of course, he makes good the damage. This teaches care in the use of books, another lesson of vast importance to youth. In truth, there was nothing under the old system, or rather want of system, which in any way taught the child lessons of care. Here every step brings with it a sense of responsibility, and teaches thoughtfulness. This plan of furnishing the books ought to prevail in all our schools, and we have no doubt that it will be so when the influence of our Normal Institutions shall be more widely felt throughout the State. Another obstacle in the way of perfect classification in the district schools of the State, has been the false views of parents in regard to the true basis of such classification. Age is not this basis. Intellectual attainment and mental power alone are to be taken into consideration. We have often seen boys and girls who had nearly attained to manhood and womanhood without an acquaintance with the simplest elements of knowledge, who could scarcely read intelligibly, or write legibly, or perform the simplest operations of arithmetic, much less explain them

when performed;—and yet we have seen these very persons too conceited and too proud to be classified with young children in the school. Parents sympathized, and the teacher's labor was greatly increased and his school thrown into needless confusion in consequence. Now the true doctrine is as we exemplify it in our Model School, or School of Practice, and in this Preparatory Institution, that those who are too self-conceited to be placed where their attainments indicate that they ought to be placed, must be humbled, or else they must altogether abandon the idea of going to school. Is a child, who admits by going to school that his teacher knows more than he knows himself, is he after all to give direction to his own course of study? The first point is for every child to discover the limited extent of his knowledge, or in other words, to be effectually humbled under a sense of his own ignorance, and to a spirit of docile, not blind, but still docile submission to the will of his teacher. Another great obstacle to the perfect classification of the children in our district schools, has been their irregular attendance. As the schools have been, we do not care much about it, but if ever they become what they ought to be, the loss of a day will be a real loss. Where there is little or nothing to gain, there can be little or nothing to lose, but if schools are good for any thing, the loss of a day or of a few days is irreparable. When children are absent from a good school one day, they in most instances lose more than they can gain in two of attendance. None of these obstacles exist in our Model School. As we have said, the books are furnished, and regular attendance is imperatively exacted of every pupil who is in health. And as for pupils themselves deciding what classes they are to join, or what studies to pursue, such a thing is never thought of for a moment. Every applicant for admission is subjected to the most rigid examination as a test of attainment. The examination is conducted by means of printed questions. The answers are to be given in writing, sufficient time is allowed for the work, and there is nothing to terrify. The written answers, of course, furnish an exhibit of the penmanship, the orthography, the punctuation, the taste or want of taste, as well as the degree of acquaintance with the subject of examination, whether that subject be Geography, Grammar, Arithmetic, or any other of the numerous subjects presented. These papers would satisfy any one of the utter deficiency in respect of elementary education that prevails in our schools. Let the skeptic go and look at them, as he can do if he wishes. What particular individual wrote a particular paper will not, of course, be told, but the papers ought to be, and I suspect are preserved, as the loudest witnesses to the necessity of improvement. The applicant is then placed just where he ought to be, just where his attainments entitle him to be placed, irrespective of his age, or any other adventitious distinction. This is a great point gained. When the school is thus classified, the plan of instruction, of course, constitutes an important feature. And, first—

The subjects presented are just those which are adapted to the mind of the child. Nothing is ever placed before him which is in advance of his

comprehension or of his power to comprehend. Great importance is attached to solid elementary training. It is fully understood that without this, the whole future course must be a farce, the whole superstructure must be a miserable failure. There is no catering to that destructive ambition on the part of children or parents which insists on rapidity at the expense of thoroughness. And here we ask any reasonable man to say what advantage it can be to a child to hurry him on to the complicated operations of Arithmetic, or even to the mysteries of Algebra and Mathematics, before he understands simple Addition, Subtraction, Multiplication, and Division. And yet we know it has been done in thousands of instances. We have seen boys poring over the musty pages of a Treatise on Trigonometry, who could not tell the difference between $\frac{1}{2}$ and $\frac{1}{4}$, or whether either one of these sums is more or less than a unit. Yes, and we have seen teachers brainless enough to call such children stupid, and to inflict punishment upon them, because they could not attain to a grasp of these sky-high subjects without the ladder of elementary training to ascend by. If the intellect of children is to be measured by such standards, every child is a stupid dolt, and we are all in the same category. But it is a ruinous, an inexcusable error. It is, of course, of importance to make progress, but to attempt to mount to high attainments in knowledge without taking the necessary gradations from the elements upwards is absolutely absurd—it is so plainly impossible, that we always did wonder that any one tried it himself, or tried to make others do it. This fault is not observable in our Model Schools. If any one is found deficient in the elements of knowledge, he must go down and take his elementary course, no matter how much stray information he may have picked up with respect to higher subjects. It is of no avail to parley about the matter. No whim of parent or child will induce us to attempt impossibilities. And the pupil must stay upon the elements till he understands them—no longer. The object is not to keep him in the school for a great length of time, but simply and solely to do the work rightly and well. Now we speak warmly and decidedly upon this point, and we believe we shall be sustained by thinking men. If a boy never can learn to recognize his letters, or appreciate the powers of them, what possible advantage can it be to put him at attempts to read? The effort should clearly be to teach him the letters, and if his whole life should pass away in the attempt to learn the characters of the alphabet, provided the effort to teach him be conducted industriously and according to the best understood modes of teaching, we shall have to be content, for we cannot go a step in the attempt to read without an ability to recognize the letters. Now reading is a most important matter in elementary training. We think it safe to observe that half the difficulties which children have in their studies at school, arise out of their inability to read understandingly. We do not intend to say that no other studies should be attempted before the art of reading be thoroughly mastered, because it is a work of a lifetime to learn to read with an appreciation of what we read,

and without this, there can be no good reading. Then, too, the understanding of words is acquired by the discovery of their relations to the things and the subjects which are met with and evolved in other departments of study. But we can never expect children to receive or become interested in instruction, given in words to which they do not attach a well-defined meaning; nor will they ever be profited to any great extent beyond the mere practice in the art of reading by any text-book study, as long as it is necessary for them to make out the words of the author by dint of hard spelling, or as long as they do not understand the art of fluently dividing syllables with correctness. We look upon this matter of reading, or learning to read, as one of transcendent importance. The great point in reading, is either to take the sense of what is read easily and pleasantly for one's self, or to give it with pleasure to others. There is no child or adult who is not under a necessity of doing both, and that frequently. In reading for one's self or for another, the sense of that which is read must be readily taken; but in reading for others, even more is necessary. The faculty of distinct enunciation, correct accentuation and emphasis, must be possessed, or the true sense of a passage cannot be given. It must be felt by the reader, or he cannot give it to the hearer. We must be excused for saying that we have had our patience more tried by indifferent reading than by any other thing that relates to scholarship. It is the very reason, no doubt, why there are so many who have no taste for reading, because they cannot read. And it is also the very reason why so many public men in the professions cannot procure listeners, because they cannot read in such a manner as to interest them. Great pains are taken to teach our children in the Model Schools how to read, and if they have not gone too far in the false notion that reading is of small importance, or that they read quite well enough already, the plan adopted will in most cases prove successful. Good reading almost necessarily implies tolerably correct spelling. If boys say "Nom-a-tive" in reading, are they not probably under the impression that the word is spelled N-o-m-a-t-i-v-e? or if they say Abbeltive, would they not probably write A-b-b-e-l-t-i-v-e? and so in many other cases. To remedy such fatal mistakes and oversights in elementary training is our determination. Hence we spend much time upon these things which in many schools is unwisely spent upon more advanced subjects; for we proceed upon the belief that laying foundations solidly is the great business of childhood and of school instruction. It is by no means the work of the school-days to exhaust the subjects of human thought. It is rather to furnish the implements with which the individual, in future years, is to delve into inexhaustible mines with successful energy and profitable toil. We propose to turn out students, not scholars. Schools do not make scholars, in the highest sense of the word, but they give to men the power to make themselves scholars. They incite love for study, and study makes scholarship. This, at any rate, is our understanding of the matter. Therefore what a child knows when he leaves school is not of so much importance as how

he knows it; what he has studied is of less moment than how he has studied. So we are careful not only as to the subjects presented to the children, but—

Secondly, we are careful as to the manner of presenting them. Our idea is to secure growth to mind. Now it is essential not only to offer nourishment to the mind, but to see that the mind partakes of the nourishment offered. Mind is strengthened by action and self-reliance. No method of teaching which relieves the children from the labor of thought can be a successful one. That must be the true method which brings all the mental powers into harmonious, vigorous, and powerful action. The "pouring in" method, as it has been called, or the method in which the teacher does the talking and the pupils the listening, in addition to many other minor disadvantages, tends to put the mind to sleep, to enervate its strength, and, in fact, to destroy even what life it may have had. And even the "drawing out" method, by the putting of leading questions, so artfully constructed as to give clue to the answers, is not a whit better. But the true "drawing out," that which we conceive to be implied in the word "education" itself, in its original force, is precisely that which we adopt. It is that of sending out our pupils to roam, as it were, over the fields of knowledge, and to bring in for display the riches which they may have gathered in their excursion. We assign to them duties adapted to their strength, and we expect those duties to be performed. We assign to them subjects for research, making ourselves satisfied that they are competent to investigate them, and giving them directions as to the places where, and the mode in which, the information required is to be found, and we expect them to come back and give an intelligent, succinct account of what they have done, and what they have discovered. That we do not over-estimate their ability to do it is proved by the fact, that the plan is in successful operation, that intelligent men and women witness it daily, and with admiration. We ask no leading questions. We leave the pupil to a dependence on himself. He learns to search, to think, to give expression to thought. He learns to think for himself, to think audibly and clearly without reference to the presence of others. We do not admit that any thing is known until it can be described in language. To develop the ability of deep and independent thinking is our great aim, and we do succeed, and shall succeed in making strong thinkers, men and women who will not be content to let others do their thinking for them. We insist upon clear processes of thought, to be judged by lucid expression. The wall slates are called into requisition constantly. Expression, illustration, demonstration are required. We endeavor to combine, as far as possible, theory and practice, to show the practical use and application of every subject taught, and thus to infuse an interest which can never attach to theory alone. The result is, that our students generally manifest a lively pleasure in the duties of the school-room. They do not give an observer the impression that they are mere automata, impelled or worked at the will of others, but rather that

they are self-regulated, conscious of innate strength, and moving as if actuated by some great and well-defined purpose. Their course has been such as entirely to free them from spiritless dependence upon their teachers, or upon their text-books. It will be noticed that they have no blind reverence for a single text-book, but that they examine subjects in all the different views presented by the different authors at hand, and are intelligently eclectic, and often entirely original in their own views. The business of the teacher is to guide them, not to do their work for them. The results of this plan are, that we have a hive of busy, cheerful workers. Each one feels that his mind is growing. Time never seems to hang heavily on his hands. Every pupil seems to think the school-room a pleasant place, and study a pleasant and profitable employment. This appears to be quite the reverse of the old order of things, in which many of the pupils sought by every possible expedient to evade the confinement and authority of the school-room. Boys and girls often learned their first lessons in prevarication by the suggestions of the school-room. A large portion of school-time was spent by them in idleness, and the rest in an endeavor to grasp subjects far in advance of their powers, or in learning theory without practice. No adult would bear such a tedious ordeal, and it is wrong to expect children to bear it without restlessness. In endeavoring to throw off such a yoke, they only obey an impulse of their gladsome, joyous, exuberant natures. The sins of parents against their children in connection with their education are almost unpardonable, because if they could not know any better way, they might at least know that a way that is unnatural is wrong.

It was beautifully said in substance in a recent address, that God never intended pain to be connected with the acquisition of knowledge, but only with moral delinquency. This idea ought always to be regarded in the education of children, and we claim to regard it in our Model Schools. We claim to have arranged our whole system in accordance with this simple, this beautiful, this natural idea, and we feel assured that the very first thing that will strike any observer of these schools is, that this idea is carried through all their operations. All faces are bright and cheerful. No countenance is darkened or deformed with sullenness or pouting. The school looks more like a happy, animated home-circle, where all is affection and confidence and ease, than a school, where duties, distasteful to the children, are rigorously exacted. And it may be asked, "How is the discipline managed?" The true answer is, that there is far less occasion under this system than under the old one, for that which we usually understand by discipline, *i. e.*, punishment. Each pupil has so much to do, and it is so strictly within his ability to do it, and he finds so much real pleasure in doing it, that there is no time and scarcely ever any inclination to be refractory. The pupils generally seem to have found the true secret of being happy, *i. e.*, by doing right for its own sake. Yet it must not be supposed that we are entirely free from a necessity of exercising discipline. In general, it may be said that the order of the schools is maintained—

First. By vigilance. Few things in the school-room pass unnoticed by the teachers. They are wide awake, and cultivate a habit of seeing every thing that transpires. This activity on the part of a teacher is one of his first qualifications. The children of a school must never get the impression that their own activity exceeds that of the teacher. It is not so here.

Secondly. By habitual self-possession. Never does a teacher more effectually impair his government than when he suffers passion to gain the control over his judgment. These teachers never permit themselves to be thrown off their guard in this respect, but exhibit unvarying self-control under the most trying occurrences.

Thirdly. By steady administration. The laws made are natural, and can be carried out, and the great secret of the order is, that they are, and the children know that they will be, enforced. No rule is laid down without reflection, and no rule, when enacted, ever becomes a dead letter without the best of reasons. Disobedience, obstinacy, rebellion are as sure to be met as the school hours are sure to come. They cannot possibly escape; and who does not know, either from observation or experience, that constant rebellion is poor business when it never succeeds?

The penalties are various. They consist—

1. In the deprivation of an expected pleasure. And here there is in this system what would have been considered an anomaly heretofore. A child may be made to suffer deeply by being deprived of what he here considers the *privilege* of reciting, or of undertaking for a time a new branch of study. The interest of the pupil is here so completely enlisted in his subjects of study, and his mind is so animated with a desire for progress, that he suffers positive pain when not permitted to proceed. This is truly one of the greatest triumphs, and one of the highest commendations of our schools, that we are making the pursuit of knowledge one of the highest of pleasures. It is so contrary to the experience of the past, that we should scarcely find fault with any one for doubting the truth of what we say. It is truth, however, and we challenge the most thorough investigation of the facts for verification.

2. Another penalty is confinement during extra hours. And here too there is a feature which merits notice. No child is held in confinement immediately after school. There is but one school session of five hours, not two, of three or two and a half each, as formerly. The hours of school are from 9 to 2 in the winter, and from 8 to 1 in the summer, with two out-of-door recesses during this time. Whether the one or the two sessions per diem arrangement is the better, is a vexed question. To discuss it here is foreign to our object. For ourselves, we must say, that the arguments in support of the one session per day seem far stronger than those against it. The confinement of the children and teachers for such a length of time is, of course, the strongest objection. We heartily sympathize with it. We sicken at the thought of imposing restraint upon the joyous little children, of shackling and fettering their gladsome spirits for so great a length of

time as our systems require, and we believe the day not far distant when different ideas will prevail upon this subject, and children will be less confined than they now are,—confined for a shorter time, but with far greater effect and more valuable results. At any rate, it will be seen that the afternoon is not taken into the school session in our plan. We use it for another purpose. At the close of the regular session, the children are all sent to their homes for their meals and refreshment, irrespective of all other considerations. We have no idea of killing children in order to make them moral or industrious. Allowing a reasonable time for refreshment, delinquents return to the school-room, and are there required to make up for the deficiencies of the morning. The time is ample. The pupil does not apply himself to his work, thoroughly jaded, but entirely rested, and there, in deliberative leisure, he finishes all that he had lazily neglected to do at the proper time, or atones for violation of rules respecting conduct. This time is also employed by the teacher in explaining difficulties and elucidating subjects of instruction to the dull and backward pupils, who are regarded in these schools with peculiar tenderness, and are the subjects of special and untiring effort. The whole system is such as to encourage and uplift, not to depress and dishearten. No passionate expressions of contempt for any scholar are ever heard by the school from the lips of the teacher. No boy or girl is ever called "stupid," "senseless," "a dunce," "a blockhead," "a small potato," or any other of those numerous appellatives which every one has heard in his lifetime, from teachers who had not learned the importance of self-control. Every child feels itself respected. He is addressed as a human being. His progress keeps pace, as it ought and must, with his capacity. He is always ready for every new step, when the necessity arises for taking it, and consequently, if he really is stupid, he is not allowed to discover his own stupidity, and his courage is constantly rising. It certainly ought to be known too, in this connection, that many children who appear at first stupid, if they are properly stimulated to the energetic use of their powers, often turn out to be in the end the brightest men and women. There can be no more reprehensible practice than that of discouraging children who appear dull by reproaching them with opprobrious epithets. Many a child, who had sterling qualities in him, must have come in this way really to credit the commonly received opinion of his own stupidity, and to discontinue exertion altogether, and thus in the end, through the folly of his teacher's course, to verify that teacher's oft-repeated predictions. But we must proceed to say that—

The order of our schools is greatly promoted by the example of the teachers. Every teacher is in the right place at the right time. He is himself, as far as possible, a realization of the great ideal of perfection in the matter of order. He is always at school in time. His own desks, books, and papers are always in order, and whatever duty devolves upon him, is always faithfully discharged. He is neat in his personal appearance, careful, but natural, in his conversation, regular and systematic in his

habits, punctual and prompt in fulfilling his appointments, regards scrupulously all his promises, improves his time with exemplary assiduity, and shows in every act and by every word that he is conscientious in what he says and does, and that he may safely be imitated. All this, however, is quiet and natural. He never asks the attention of his students to himself as a model for their imitation, but commends himself by being that model. There is inseparable from his very presence, that "unconscious tuition" which has been so beautifully described by one of our most gifted brethren.* It has a power, though it seems to know it not. That power is felt, though none can say why. It is not an unpleasant, but rather a delightful constraint, the just respect that children as well as adults pay to goodness, self-control, fidelity, conscientiousness. All have felt this power, but none can say how. But again we must say that—

The order of these schools is maintained by direct appeals to high motives. The students are taught that by correct courses of conduct and faithful attention to duty, they will really promote their own happiness and well-being. True views of life are imparted to them.

1st. They will have a social position to occupy. They must now set forth in such a manner that they will ever maintain the respect of their fellow-men. Hence they must cultivate the qualities essential to true manliness. They must in their walk and conversation be orderly, polite, gentle, considerate of the comfort of others. They must hold the profane, and the obscene, and the false in unutterable contempt. They must be candid, sincere, truthful. They must never persist in a known wrong for a moment, though the acknowledgment of it may involve brief mortification. No human being, in fact, can ever be a man in the true moral sense of the term, unless he is above the feeling of mortification in acknowledging an error, which he has discovered to be such, though he had previously supposed it to be otherwise. The highest and brightest adornment of noblest manhood is truth. The just end of all study and philosophical investigation is truth. Truthful models, truthful ideas, truthful hopes, and truthful prospects are therefore constantly presented to our students, that their admiration may be drawn powerfully to that which is true, and just, and lovely, and of good report.

2dly. They will have a civic position to fill. Truth here too, as in social life, is the highest ornament of the man. Oh, how much falsity, hollowness, shallow pretence, and accursed duplicity is found in high places! Is it not time to draw the attention of our children to the corruption and the mendacity, the humbuggery, the offensive forwardness, and the transparent selfishness of ambitious men, who wallow in the turbid shallows of the political pool in search of the pearls of office, honor, place, and emolument, who seek to wheedle and cajole the dear people into such an appreciation of their own merits, as will insure them the object they covet? This gained, what care they for the dear people? We look to education, to

* Prof. F. D. Huntington in the American Journal of Education, vol. i. p. 141–163.

right education, moral education, to adorn our rising sovereigns with the lustrous ornament of truth, and we seek in our schools to prepare our students properly and well for the social circle not only, but also for the relations of civil and political life.

We scruple not to say here, too, that our pupils are young immortals, and we realize our duty to them in this important aspect. We open our schools with the reading of a passage of Scripture without note or comment, and we invoke the blessing of God at the commencement of each day upon the duties and labors of the day before us. It is done solemnly and seriously, and not as an unmeaning service. Nor do we hesitate to use the general precepts of religion in moral instruction; but not by a word or act, or even by implication, is one attempt made to inveigle or decoy any pupil into the meshes of any denominational net, or to carry the citadel of any heart for an external form, or a sectarian creed. We believe that education can never be complete without the culture of the heart. We know of no truth like Bible truth, no power like Bible power, for this purpose. We avoid with the most scrupulous care the propagation of any sectarian view, but if we wish a golden rule, "All things whatsoever ye would that men should do unto you, do ye even so to them," we hesitate not to adopt it because it is in the Bible, or because the sublime precept first fell from the lips of the Redeemer of man. Nor do we hesitate to go to the Bible for those fundamental truths that lie at the foundation of all correct philosophy, and which can be derived from no other source with equal clearness, some of them from no other source at all, as the creation of the world, the Bible view of which alone can set at rest all questions on the subject of cosmogony. It is general truth, simple moral truth, as it affects our relations with and to our fellow-men, and simple religious truth, as it affects our relations to God, not controversial or controverted points, that we feel at perfect liberty to use and inculcate, because they are in consistency with the views of all sects. It is what may lead our pupils, when they grow up, to be thoughtful and examine for themselves their duties to God and man in their broadest sense. Let us take care that in our horror of sectarianism we do not lose sight of the fact admitted by all sects, that the God of the Bible is the God of our nation, acknowledged in its foundation, acknowledged hitherto in its progress and its rising glory. Let us not, from a dread of sectarianism, induce Him to spread his sheltering wing, and take his flight forever from our public institutions. Disastrous indeed, fatally disastrous, would such withdrawal be. We have no greater evil as a nation to fear.

It is believed that we have adopted the right plan in these institutions, and that in a few short years the happy results of what we have done will appear in a renovation of our school system, in the elevation of our schools throughout the State to a normal condition, in the securing of correct, salutary, model methods of instruction and discipline.

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